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Nominal Bore Of Drill Pipe, Inches		1.815	2.151	2.764	3.826	4.859	5.965
OUTSIDE DIAMETER OF TOOL JOINT, Inches	API STANDARD	3⅛	3¾	4¼	5½	6¾	7¾
	API "Full Hole"			4½	5¾	7	8
	HYDRIL Internal Flush Tool Joint	3⅜	3⅞	4½	6	7	8⅛
BORE OF TOOL JOINT, Inches	API Standard	1	1¼	1½	2¼	2¾	3½
	API "Full Hole"			2 7/16	3	4⅛	4 11/16
	HYDRIL Internal Flush Tool Joint	1 11/16	2⅛	2¾	3 11/16	4 11/16	5 11/16
AREA OF BORE OF TOOL JOINT, Square inches	API Standard	.785	1.227	1.767	3.976	5.940	9.621
	API "Full Hole"			4.666	7.069	13.36	19.15
	HYDRIL Internal Flush Tool Joint	2.582	3.55	5.94	11.42	18.19	27.69
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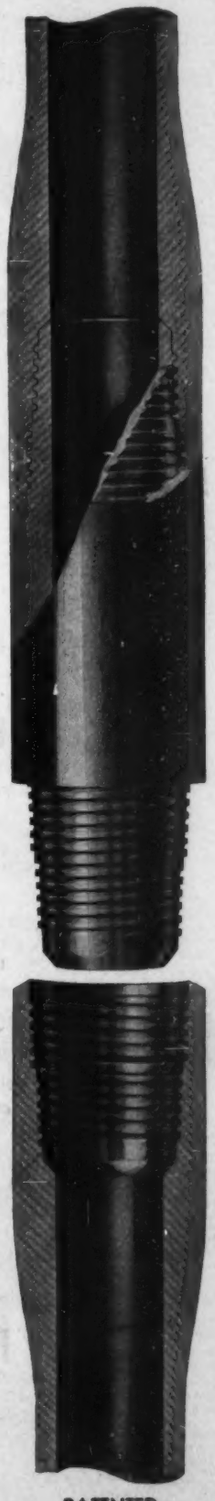

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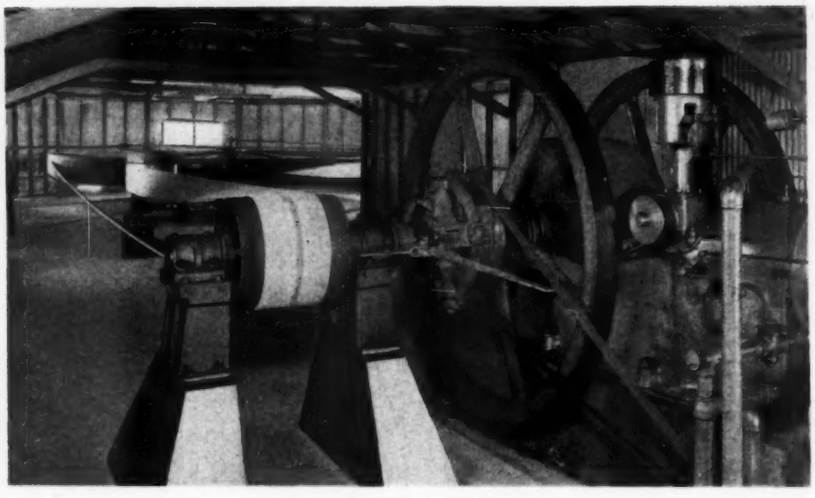

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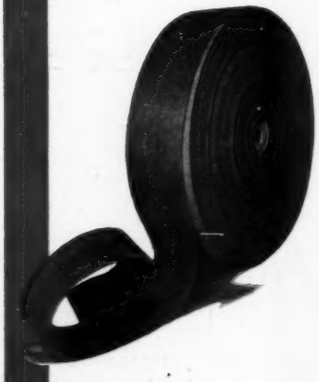

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THE OIL AND GAS JOURNAL

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OIL MAN'S CALENDAR

September

26-27—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

October

1-5—Cleveland, Ohio, National Safety Council, Cleveland, Statler, Carter and Hollenden Hotels.

9—Michigan Independent Petroleum Distributors Association, place to be named later.

10-11—Society of Automotive Engineers, Production Meeting, Detroit, Mich.

12-13—American Institute of Mining Engineers, Petroleum Division, fall meeting, Tulsa, Mayo Hotel.

16—Kansas-Oklahoma Division, Mid-Continent Oil and Gas Association, annual membership meeting. Date subject to change.

16-17—Chicago. National Association of Lubricating Grease Manufacturers, annual meeting. Stevens Hotel.

16-18—Big Four State Jobbers Association Convention, Kansas City, Mo.

24-25—Indiana Independent Petroleum Association, Inc., First Convention, Hotel Severin, Indianapolis, Ind.

29—American Gas Association Convention and Exhibition, Atlantic City, N. J.

November

Los Angeles, Calif., American Association of Petroleum Geologists, Pacific Section.

12-15—Dallas, Tex., annual meeting, A.P.I.

15-17—American Institute of Chemical Engineers, Pittsburgh, Pa.

19-23—Automotive Service Industries Show, Public Auditorium, Cleveland, Ohio.

December

6-7—Fifth annual meeting, Independent Petroleum Association of America, Fort Worth, Tex.

January

7—New York, Society of Automotive Engineers, annual dinner.

8-10—Milwaukee, Wis. Annual Convention and Equipment Show of Wisconsin Petroleum Association, Plankinton Hotel.

April

8-13—Oil Equipment and Engineering Exposition, Houston, Tex.

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Foreigners Want 40,000,000 Bbls. of East Texas Oil; Illegal Crude Output on the Increase

By JAMES McINTYRE

THE quantity of illegal oil produced in East Texas in the past week is variously estimated from 75,000 bbls. per day upward. Railroad Commissioner Thompson admits to a 40,000-bbl. overproduction. Hot oil producers, refiners and shippers, emboldened by recent court decision favoring them, and obstructing orderly production and shipping, seemed to throw off all restraint, creating a situation more serious than it has been at any time this year.

A Dallas agent for foreign oil buyers submitted to the Texas Railroad Commission on Monday an application for 40,000,000 bbls. of East Texas oil for export to Japan, China, Germany and England, to be shipped at the rate of 250,000 to 350,000 bbls. weekly, and all of it to be guaranteed legally produced oil. The prospective purchasers and the price to be paid were not divulged; neither was it made known for what purpose the oil was to be used.

Gov. Miriam A. Ferguson submitted the subject of a new law to the Texas legislature to meet a recent court decision, which, it was thought, would give the Railroad Commission power to regulate the shipping of petroleum products under the tender system.

This was a week of big wells in Oklahoma, including a 7,500-bbl. well in the new Polo Pool in Noble County; a 10,000-bbl. well in the Lucien Pool in Noble County; a 7,000-bbl. producer in the South Burbank Pool in Osage County and an 8,000-bbl. well in the new deep sand portion of the Fitts Pool in Pontotoc County.

The Cooper Pool in Lea County, New Mexico, has nine completed wells with a potential production of 48,000 bbls. per day, measured on a basis of their short-time initial production. The latest completion produced 310 bbls. of oil in 56 minutes and was then shut in. Development work in a number of Rocky Mountain fields is on the increase.

Seven proposed locations have been made around the discovery well in southern Houston County, Texas, some of the locations being miles distant, indicating a confidence in the general area. The discovery well, not yet completed, has shown a production from 25 to 30 bbls. per hour.

Late developments in the Mecosta County gas field in Michigan indicate a field in that county and Montcalm County 10 miles long.

Drilling operations in California have increased steadily through this year and the state is two months ahead of its last year's status in this respect. The drilling is well scattered, so that no field can upset the market. Deep zone fields of large well output are being developed slowly.

A deep test on the flank of the Jackson gas structure in Rankin County, Mississippi, was finished as a failure at 4,130 feet.

Crude Oil Production in the United States

Estimated daily average production for the week ending September 15, and a comparison with previous week and Federal allowables, follow:

	Sept. 15	Federal allowable for September	Sept. 8
Oklahoma—			
Oklahoma City	174,005	.....	112,790
Seminole-St. Louis	93,665	.....	73,580
Remainder of State	234,750	.....	230,540
Total Oklahoma	502,420	461,000	416,910
East Texas—			
Lathrop	195,950	.....	206,910
Kilgore	177,300	.....	159,606
Joiner	150,550	.....	138,517
Total East Texas	523,800	.....	505,033
West Texas	155,425	.....	154,020
North Central Texas	87,730	.....	88,150
Texas Panhandle	56,375	.....	54,725
East Central Texas	52,473	.....	52,275
Gulf Coast—Texas	177,053	.....	179,175
Southwest Texas	57,152	.....	58,033
Total State of Texas	1,110,008	968,400	1,091,411
Kansas	126,585	120,700	120,900
North Louisiana	24,105	.....	24,225
Gulf Coast—Louisiana	73,327	.....	74,426
Total Louisiana	97,432	87,200	98,651
Arkansas	31,285	29,300	31,190
Eastern Fields (except Michigan)	102,200	97,300	102,200
Michigan	31,376	29,300	30,917
Rocky Mountain area	95,570	91,500	96,900
California—			
Santa Fe Springs	39,900	.....	40,700
Long Beach	63,500	.....	60,150
Mountain View	12,500	.....	6,400
Elwood	10,500	.....	11,400
Kettleman Hills	65,750	.....	69,500
Remainder of State	301,850	.....	314,450
Total California	494,000	457,000	502,600
Total United States	2,590,876	2,341,700	2,491,479

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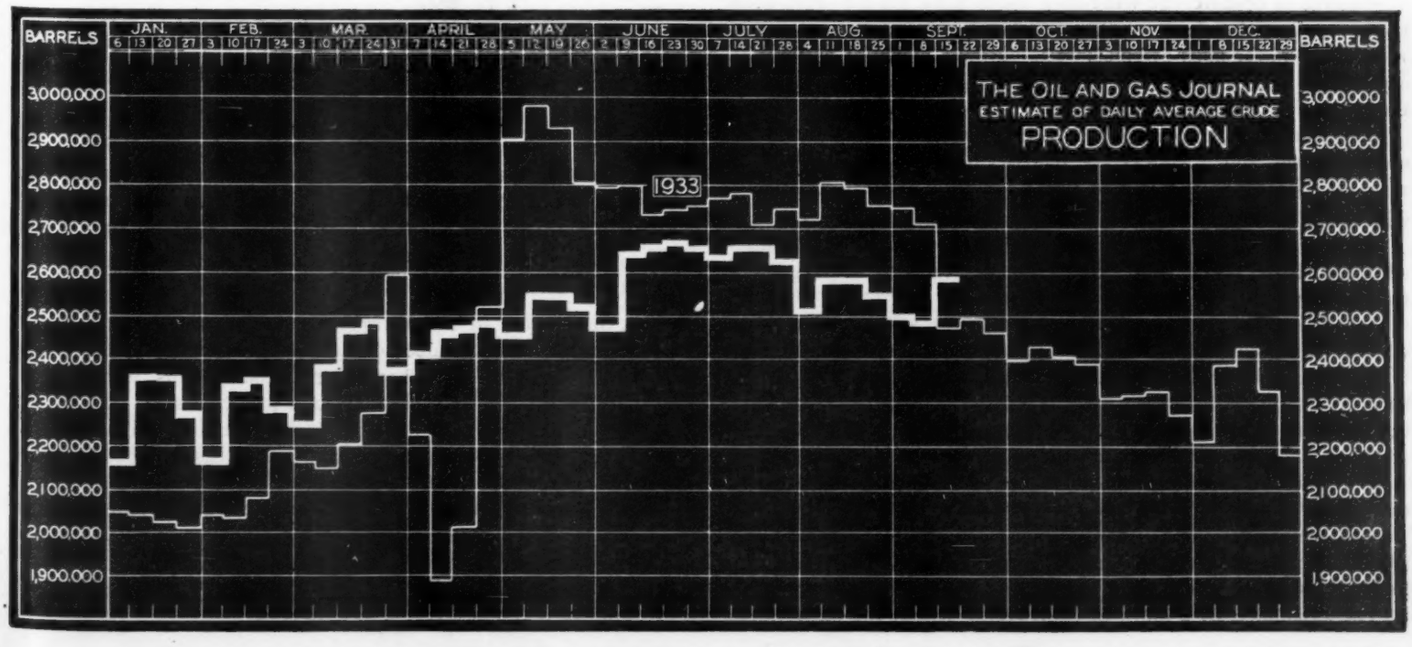

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Back to Earth

What is the oil industry going to say to the Congressional subcommittee at the hearings on oil legislation?

It should be something specific, something definite, straight to the point, instead of the conglomeration of confusing and distracting digressions which have cluttered consideration of the code during the past eighteen months.

We have strayed afar from the objective at the outset—the curtailment of crude production to demand. We have been off hopefully on one wildgoose chase after another, price fixing, marketing agreements, pooling agencies, buying plans, refinery allocations, commerce quotas, excise taxes, questionnaires, reports and forms and we are just about where we started.

Outside of dollar crude what have we to show for it? And dollar crude was not the result of the code but in anticipation of results which have never been attained. The gasoline market was stronger a year ago in anticipation of expected benefits than it is today when those benefits have not been realized.

The time has come to declare definitely that we have been off on the wrong foot. Unless the industry pulls itself together and retraces its steps it is likely to find itself in a Federal straitjacket with every well, plant and outlet ticketed and quotaed.

That is where the Federal oil administration, with due acknowledgment of Mr. Ickes' ability and good intentions, is heading. It is most certainly not where the industry wants to go.

The Oil and Gas Journal, like the industry at large, has given whole hearted support to the Federal administrator, hoping against hope that a solution of the crude problem might be found. But it becomes increasingly clear that the administration has abandoned hope of stabilizing the industry short of putting it in such a straitjacket in every department. On that program we part company.

A pioneer in the movement to keep crude production down to demand, The Oil and Gas Journal has consistently and persistently warned the industry of the danger of Federal control. It was only when effective state regulation in Texas seemed impossible that Federal assistance, not control, was welcomed by the industry.

The assistance, by a quirk of controversy within the oil business, was sidetracked from the real purpose, crude regulation, and has been wandering up and down dead ends ever since.

Now that it seems headed directly for absolute Federal control the industry feels cheated by circumstances and should declare itself emphatically.

The fundamental weakness of the code was the assumption of authority which has never been confirmed by the supreme tribunal. The Federal crude production allowables were merely recommendations, the hope being that the psychology of the moment subordinating the individual to national leadership in a world crisis would induce the states to accept them. From that assumption it was an easy step to the further assumption of allocating refinery production. Authority was assumed, although it could not be usurped, in the belief that acquiescence would follow. It did not.

The danger now is that Congress may be asked to legalize that assumption of authority and extend it to all phases of oil.

As a matter of fact "the code does not, and cannot, confer power to control production within the states and no such power now exists under any act of Congress." Furthermore, the opinion that Congress has no authority, under the power to regulate commerce, to control the production of petroleum within the states has never been overruled. "Production is not commerce and the production of petroleum within a state is not interstate commerce."

Stuffed Club

The attempted Federal regulation of crude production during the past year failed because its only weapon was a stuffed club.

The original draft of the code did not provide for control of refining, "both because the industry had had no experience in such control and because it was believed that effective control of crude production would render refining control unnecessary."

But as in other businesses the code was seized as an opportunity to exploit all sorts of theories and the basic problem of crude regulation was elbowed aside by controversies over refining and marketing which have practically monopolized the attention of the oil administration and of the Planning and Coordination Committee.

Each struggle in this controversy has edged closer to the brink of Federal control. These allocations and agreements and buying plans are, of course, only make-shifts. Any suggestion that the refining and marketing business should be tied up in such regulations indefinitely would be intolerable.

As C. B. Ames said the other day, "No bureau in Washington and no committee of the industry can be long allowed to dictate to every refiner how much gasoline he may produce. The right of an individual to conduct a lawful business in a lawful way without control, either by his competitors or by a Washington bureau, is too fundamental to be long relinquished."

That remark of Judge Ames should be a douche of cold water to a swooning industry about ready to give up. The fact is we have been so long in the clouds that we need to get back to earth, perhaps with a jolt.

Like the rest of the country the oil industry had got so low during the four years of depression that it almost despaired of recovery. The dramatically staged rescue took on all the glory of an apocalyptic vision. Everything had failed us but Washington and the impulse was to turn everything over to Washington, including the oil business.

Promised Land a Mirage

But, in the case of the oil industry, experience has shown that Washington has been unable to produce the promised land. Aside from dollar crude, based on hopes rather than results, we are about where we were except in these important particulars.

The industry now finds itself wrapped up in an endless tangle of regulations and restrictions, subject to an unceasing flood of questionnaires and reports and so generally badgered by official supervision and interference that it has barely time to attend to its business.

It discovers that the code has created what never existed in the industry before—a labor problem.

It now faces still further regimentation under complete Federal control unless it can be averted in Congress.

Disastrous as the flood of overproduction has been it will pass. Federal control once riveted upon the neck of the industry will never be removed. It will become the prey of politics and the haven of bureaucracy. Carried to its logical limits motorists will be quotaed at each filling station and possibly rationed with gasoline. After what we have seen nothing is too absurd or seemingly impossible to be beyond the scope of experimental administration.

It took seventy years to discover an East Texas field. We may never find another. We are consuming almost a billion barrels a year. To maintain half of that supply we need to discover each month a pool of 2,000 acres capable of producing 20,000 barrels per acre.

Since the opening of East Texas the only field of importance discovered has been Conroe. The day may come, sooner than now expected, when the need will be for new production instead of curtailing existing fields. The industry in a Federal straitjacket will wish it had kept its freedom, but it will be too late. The oil business will be as barren of opportunities for initiative as the post office.

That sort of regulation will be purchased too dearly by the industry and by the country. Without the possibility of rewards commensurate with the risks of oil exploration who will care to venture to find new sources of supply? If we fail to find any appreciable portion of that billion barrels needed annually to maintain supply what effect will it have on motorists? What effect will it have on the oil needed for national defense, for the products required to move and lubricate our industries and commerce?

But, it may be asked, how can the drift towards Federal control be checked? The first step should be for the industry, represented by its leaders, to take a definite stand before the Congressional subcommittee on the constitutional question of authority.

Avoidance of Constitution

The avoidance of constitutional limitations during the experimental legislation of the past eighteen months was tolerated at first because it was hoped that some definite policy would be evolved that would be consistent with American institutions.

If, in the case of the oil industry, that avoidance is to be succeeded by further encroachments upon the constitutional rights of the industry it must be challenged to a conclusion. The day for toleration has passed.

The Congressional committee and the oil administration should be told that if a bill is passed for Federal control of the industry it will be immediately tested in the courts, that there will be no more complaisant trailing along in the hope that everything will come out right.

The question naturally follows, if we abandon the oil administration's plans what is the alternative? Criticism to be effective must be constructive. Let us look at the record.

We tried voluntary co-operation and were thwarted by a minority that could see only its own gain. We tried state regulation and it failed. We have tried Federal supervision and that also has been a failure.

The one remedy that has not been tried has worked well in other cases. That is joint effort by the Federal and State governments in oil producing states through an interstate compact.

When that idea was broached at Colorado Springs some years ago it was under unfavorable auspices, the impression being created that it was to be forced upon the industry. Natural resentment among the oil men present wrecked the plan and has kept it out of the picture since.

Discussion of it has been revived. Of interest is the recent address of Judge Ames and the statement of Congressman E. W. Marland, nominee for governor of Oklahoma that if elected he will invite the governors of Texas and California to unite with him in a plan for an interstate agreement to curtail oil production to need.

Such a compact would require an enabling act by Congress, leaving the details to the states. It would also require approval by the state legislatures which, however, would be directly interested in the welfare of the oil industry in their states.

It should not be difficult under proper auspices to reach an interstate agreement on allocations which would be fair to each state and bring about a stabilization of the oil business which would greatly redound to their common advantage in revenues.

It could easily be shown that under such a plan the state which overproduced would not only injure its fellows but would deprive itself of revenue and exhaust its resources without adequate return.

The advantage of this plan would be that its constitutionality is already established. It involves no departure from American principles, no regimentation of the industry, no straitjacket.

Basic Question

It is limited strictly to the basic question of crude production which, once settled, will stabilize the refining operations and solve most of the marketing problems which arise primarily from the overproduction of crude.

To the objection that this may take some time the answer is that so would the enactment and testing of a Federal control bill but in the one case the industry would be left self-governing and in the other it would be reduced to the servitude of a governmental bureau.

The experience with the oil code proves that there is no short cut to stabilization. In that instance it has been another case of the more haste the less speed. Regulation has followed regulation and revision has followed revision so rapidly that nobody has been able to keep up with them.

The example of governmental interference in the oil business, even with the well intentioned supervision of Mr. Ickes, has been a demonstration of its utter inability to cope with modern business problems. For nearly three months attaches of three governmental departments have been threshing around in East Texas without results. The governmental system of bureaucracy prevents either initiative or decision without countless detours and delays although instant action is required.

Putting the industry in that sort of harness would be worse than ten East Texas fields. Even now the shackles of unnecessary regulation are impeding the industry on every hand. What would it be with bureaucracy in complete control?

Newspapers and all trade publications which have the interest of the oil industry at heart should take a definite stand against Federal usurpation.

When Federal assistance was first invoked, under the old Federal Oil Conservation Board, it was with the hope that restrictive legislation which deterred oil men from common action in coping with their problems might be lifted. It is true that has been done under the recovery act subject to the decisions of the attorney general. But the situation has been complicated by other considerations which produced only confusion. The attempt to build a refining and marketing structure upon an unstable production foundation was bound to fail. It was trying to balance a pyramid on its apex instead of its base.

The Federal assistance originally sought was permissive and cooperative, not compulsive, helpful rather than meddling. There was no thought that the government would allocate refinery runs, regulate hours and wages, or levy an additional tax of a million dollars a year to maintain bureaus on the back of the industry.

Stabilization, Not Straitjacket

The oil industry should tell the Congressional committee that it wants stabilization but not in a straitjacket. It has become the second largest industry in the country through the individual initiative and enterprise that has been its chief characteristic from the days of Drake to the present hour. It is not prepared to surrender those prerogatives guaranteed to every American under our system of government. It is done with temporizing and compromising and experimenting submitted to in good faith only in the stress of national emergency.

And judging by the public reaction of the past three months the American people are beginning to feel the same way. The time is ripe. The issue should not be clouded. It should be recognized by all that the industry is fighting for its life. It should take its stand under the protection of the Supreme Court and the guarantees of the constitution.

Refiners Discuss Research Work Before American Chemical Society

By ROBERT C. CONINE

CLEVELAND, Ohio, Sept. 15.—Isolation of petroleum components by means of various solvents and studies involving the methods of determining physical characteristics of petroleum fractions and pure hydrocarbons shared interest equally with those papers dealing with the more work-a-day matters of laboratory control, gasoline stability and plant maintenance problems, in the sessions of the petroleum division of the American Chemical Society, September 11 and 12. More than 100 oil chemists attended.

At the election of officers Frank Hall, Texas Co., New York City, was named chairman; Jacques C. Morrell, Universal Oil Products Co., vice chairman, and C. R. Wagner, Pure Oil Co., was re-elected secretary and treasurer. F. W. Sullivan, Jr., Standard Oil Co. (Indiana), the retiring chairman of the division, and P. K. Frolich, Standard Oil Co. of New Jersey, were placed on the executive committee.

While no announcements outside the program were made, it is understood the division finds itself with a surplus of cash on hand and it is considered likely these funds will be used either to establish a scholarship, or to finance the translation of a number of technical papers into English. The American Chemical Society award in pure chemistry (initiated by A. C. Langmuir) was presented to Dr. C. Frederick Koelsch, University of Minnesota.

Sulphur in Gasoline

Eleven papers were presented in the petroleum division meetings. "The Effect of Alkyldisulphides and Sulphur on the Color of Gasolines," was the title of a contribution by Gustav Egloff, J. C. Morrell, W. L. Benedict and Charles Wirth III, all of Universal Oil Products Co., Chicago. They stated that because mercaptans are converted to disulphides in the sweetening reaction, and because excess sulphur remains in the gasoline after sweetening, it was decided to make a more complete study of the contributing effect of the disulphides and free sulphur to color instability of gasolines. Observations were made on the effects of adding pure disulphides and sulphur to gasolines. The gasolines were exposed in quartz bottles to the light of a carbon arc lamp for 15 minutes, or a stated equivalent to two hours noon June sunlight.

The investigators, working with straight-run, cracked and 50-50 blends of straight-run and cracked gasolines, found that sweetening the gasolines with plumbite and sulphur yields a product of greater instability to light than the original sour distillate, and that the stability of the gasoline is improved when the excess sulphur used in treating is removed. They conclude that color instability of the doctor sweetened gasolines is due to the combined effects of free sulphur and disulphides which is greater than that of either operating separately.

Disulphides added were ethyldisulphide, n-propyldisulphide, n-butyldisulphide, n-amyldisulphide, and iso-amyldisulphide.

Along similar lines was the presentation of C. G. Dryer, J. C. Morrell, Gustav Egloff, and C. D. Lowry, Jr., Universal Oil Products Co., entitled Part 3, Storage Stability as Related to Induction Period and Critical Oxidation Potential.

They stated that the results obtained in the investigation with a number of inhibitors support the conclusion that there is a relationship between oxidation potential and inhibiting value. There is evident a correlation, they said, between potential and storage life, but between compounds of widely different structure it is not as exact as when considering closely related compounds. They point out that hydroquinone proved better than catechol, as expected from their potentials, but out of line with their induction period measurements. The effectiveness of 2-amino-4-nitrophenol, they said, is not predictable from potential, and may be due to an ionization induced by the nitro group. The group of inhibitors having potentials below 0.8 volt are particularly effective in stored gasoline, and had been found earlier to be effective in increasing induction period, the investigators reported.

A.P.I. Projects Presented

Two reports in connection with Project No. 6, of the American Petroleum Institute, "The Separation, Indentification and Determination of the Constituents of Petroleum," by research associates of the U. S. Bureau of Standards, representing the Institute.

In their paper, "The Isolation of a Nonanaphthene from an Oklahoma Petroleum," Joseph D. White and F. W. Rose, Jr., discussed the separation from petroleum by fractional crystallization, from a solution of liquid propane and methane, or in dichlorodifluoromethane, of a distillate boiling normally between 136° and 137° C. and having an empirical formula of C_9H_{18}. In the report they say that the product is probably a derivative of a cyclopentane, and that it may possibly be a mixture of structural or stereoisomers. Their experiments indicate that the nonanaphthene isolated cannot constitute more than 0.1 per cent of the crude petroleum.

DR. J. C. MORRELL

R. T. Leslie, discussing the critical solution temperatures of 17 paraffin and naphthene hydrocarbons of the naphtha fraction of petroleum, correlated these properties with the boiling points and reported that to predict the behavior of a distillation fraction on extraction, it would be necessary to determine the phase relations of the solvent and all the constituents present since the hydrocarbons mutually affect one another's solubilities. In separating paraffin, iso-paraffin and naphthene hydrocarbons in the naphtha fraction, their boiling points lying closely together, Dr. Leslie said differences in critical solution temperatures were so slight as to demand a highly selective solvent.

Specific Heat Correlations

The published data on specific heat of liquid pure hydrocarbons and petroleum fractions were reviewed briefly in a paper of that title by L. P. Gaucher, Texas Co. The author pointed out it is necessary to rely entirely upon actual laboratory determinations and their interpolation and extrapolation for the prediction of this property in engineering practice. He pointed out that results have been published covering nearly 1,000 determinations on over 230 different petroleum fractions. There have been only two general correlations attempted, and some of the deviations are extensive, Mr. Gaucher said. The study was confined to those properties which are convenient to use and readily available in commercial practice, such as boiling point and specific gravity. The investigator said the results of this study were largely of a negative nature, but felt more of the same trial and error attempts to improve on existing correlations are warranted. Until further developments, he said, it is believed the equation of Watson & Nelson is the best available for the estimation of the specific heats of petroleum fractions.

Research on Detonation

In their paper, "Knocking Characteristics of Hydrocarbons," Wheeler G. Lovell, John M. Campbell and T. A. Boyd, General Motors Corp., presented data on 103 hydrocarbons, including paraffin, naphthene and aromatic compounds, tested in a variable compression ratio engine with the results reported in terms of compression ratio at incipient knock under definite conditions of engine operation. They found that in general the qualitative general correlations between knocking characteristics and molecular structure when measured in dilute solutions hold for the most part, with some notable exceptions which arise from the

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Design of McMurray Refinery Permits Easy Addition of Cracking Equipment

By ALLEN M. PEAIRS
Ampco, Inc., Dallas, Tex.

The site for the McMurray refinery at Arp., Tex., was selected early in January, 1932, and the location of the refinery has been a subject of considerable comment among the refining fraternity in East Texas during the intervening time due to the natural beauty of the site. However, much more important features influenced the location of the refinery, some of which are explained in this article.

It was advisable to select a site near the producing properties of the company and also convenient to the highway and railroad for loading facilities. A point was selected 1½ miles east of Arp on a hill located between the highway and the railroad. The highest point on the hill was 78 feet above the rail on the main line.

The pipe still and fractionating tower were located at the highest point on the hill and the run tanks and storage

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Pipe still at the McMurray refinery during its construction in 1932

Hearings on Federal Control Bill Are Opened at Washington With Government Witnesses on Stand

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Sept. 18.—Hearings began Monday before the special subcommittee of the House Committee on Interstate and Foreign Commerce, which is considering whether Federal legislation should be passed to govern the oil industry.

The committee is composed of five members: Representative Cole (D.) of Maryland, chairman; Representative Kelly (D.) of Illinois; Representative Pettengill (D.) of Indiana; Representative Mapes (R.) of Michigan, and Representative Wolverton (R.) of New Jersey.

Secretary Ickes appealed for Federal oil production control legislation, suggesting the Government be empowered to allocate production between units within the states in cases where the latter are "unable or unwilling" to make such allocations.

"There is need," he said, "for a permanent oil conservation policy for the United States."

"The division of the state's share of the national total of crude permitted to be produced among the pools, fields, leaseholds or well within any state is the primary responsibility of the state," Ickes told the committee.

Asks for Power

"But where a state is unable or unwilling to make this division within the total share assigned to it by the Federal agency and until such time as it has actually done so, I feel that power should be given for the designation by the Federal agency of the state committees which would be authorized to make the proper division in the same general manner as do the conservation commissions and officers of the other states.

"Producers in a state who violate the orders of the state, thereby tending to cause an increase in the total production of that state over the total share assigned to it by the Federal agency, should be subject to punishment under Federal as well as under state laws.

"The states should be accorded full legal protection against the possibility of unreasonable action by the federal agency in the allocation of crude oil production. In other words, there should be ample provision for public hearings and for appeals to the courts, but such hearings or appeals should not be used as a means of postponing the effective date of any allocation."

The secretary said that if possible there should be joint federal and state hearings within the states in the determination of proper drilling in development programs.

He added that if there is to be control of domestic production and refining "imports of crude oil and products should not be controlled."

No Marketing Proposal

The secretary told the committee the administration's experience in the field of marketing had not been "sufficiently conclusive to warrant the recommendation of any provisions relative to the retail selling of petroleum products.

"Neither have I any immediate suggestions to make regarding pipe lines. This is a subject so involved that the possible course of legislative action is not at present clearly defined.

"There is no simple solution of the question of oil conservation. It involves, as I see it, recognition of the rights of the producing states as well as of those in which consumers only are found. It involves recognition of the provision of the constitution designed to protect the people in matters of commerce as well as in matters involving the national defense."

Amos L. Beaty, chairman of the Planning and Coordination Committee, recommended control of commerce maintaining that only commerce can be legally controlled. He favored this in the interest of first, stability in the industry, and second, conservation.

H. B. Soyster, of the U. S. Geological Survey, submitted a resume of petroleum geology in the United States, showing areas impossible of production, improbable, unfavorable and possible, possible including proven fields and every small area ever expected to produce. Reserves are estimated at 13,250,000,000 bbls.

Mr. Soyster said if the rate of production of 1933—905,665,000 bbls.—was maintained the supply would be withdrawn within 15 years. He added, however, it would be physically impossible to continue withdrawals at such a high rate, and said it might actually take 30 years to withdraw the total present estimated reserve.

He testified 84 per cent of this reserve was in Texas and California and 91 per cent in Texas, Oklahoma and California.

Of 518 new fields discovered between January, 1925, and December, 1933, there were 25 in California, 57 in Oklahoma, 221 in Texas and the rest in 15 other states.

Under the above estimate he calculated reserves will last about 15 years at the present rate of extraction, but will last longer due to decline of flush production. Pennsylvania will produce for considerably more than 20 years due to methods of lifting oil. The figures used were based on estimates submitted by engineers of companies operating in each field but subject to revision due to the fact engineers might differ in the method of arriving at the figures. At present only between 25 and 35 per cent of the oil is recovered. Shale reserves were not considered in the estimate.

In Mr. Soyster's opinion, the A.P.I. Committee of Eleven of 1925 would write a different report today on the subject of exhaustion of reserves.

Danger of Exhaustion

William S. Levings, of the Petroleum Administration Board staff, said that under present conditions there was imminent danger of exhausting the national petroleum reserve.

Chairman Cole drew from the witness, however, the statement that he believed production from January 1, 1933, to August 1, 1934, had been below the allowables set by the oil administration.

Mr. Levings said production from January 1, 1933, to August 1, 1934, had been at a rate two and one-half times as fast as the rate of discovery of new sources and thus "we are dipping substantially into our reserve."

He said 59 new pools, providing an estimated reserve of 600,000 bbls., had been discovered from January 1, 1933, to September 1, 1934, and that the great bulk of that new production was in Texas, California, Oklahoma and Kansas.

Unit Operation

Ben E. Lindsly of the Bureau of Mines, recommended the enactment of legislation to compel operation of pools as units, in a manner similar to that in which Kettleman Hills, in California, has been developed. He believed the states themselves were ready to do anything possible to improve the situation of the industry.

The most glaring example of waste he knew of was in the Texas Panhandle, where he asserted 1,000,000,000 feet of gas per day had been permitted to blow into the air. He added competitive conditions forcing operators to "get the oil as quick as they can" had resulted in wasteful methods which would continue until the necessity was removed. He cited Kettleman Hills as an example of efficient operation, saying only 85 wells had been drilled there in a six-year period, whereas in East Texas 14,000 wells were drilled in four years.

"Probably 1,000 wells would have produced just as much oil," he remarked.

He contrasted the Kettleman Hills,

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I. C. C. Pipe Line Valuation Survey; Gasoline Buying and Stripper Wells

By HUGH D. MALLON

WASHINGTON, D. C., Sept. 17.—With investigations and surveys of the oil industry the order of the day, a new survey is being started by the Interstate Commerce Commission on pipe line valuation. At the same time, representatives of the petroleum administration are being heard by the Congressional Investigating Committee in support of the proposed Federal legislation for the control of the oil business, and numerous members of the industry are here ready to give their views on the matter of permanent Federal regulation.

In connection with the pipe line valuation survey, requests are being made by the commission asking that a committee of experts be appointed by the industry to confer with the government officials for the purpose of expressing the views of the pipe line companies and to represent and speak for those companies.

Act Requires Co-operation

Under the law it is required that common carriers subject to the act shall co-operate with the commission in establishing valuation for such carriers. It is pointed out, by the commission, that such co-operation is especially desirable at this time so that the work of valuation may be carried forward with the greatest possible economy both to the industry and to the government, and with the least inconvenience to all concerned.

The suggestion is made by the commission that the pipe line industry appoint, or create an organization or committee to represent them generally in these proceedings.

The purpose of this survey has not been definitely learned, as yet, but when the work is completed it will probably be used as the basis of establishing rates. At the present time the commission is engaged in an investigation of pipe line rates and practices, but the valuation inquiry is a separate undertaking and not connected with the other.

It is known that the Government is averse to a general rate reduction, at this time, due to the fact that such a reduction would decrease the revenue which the Government hopes to collect under the consolidated return clause in the revenue act. Besides this, such a rate reduction would, it is believed, result in a loss to the railroads of a considerable portion of its present revenues from tank car shipments of petroleum and its products.

Gasoline Buying Begins

The first purchases of legally refined gasoline, being bought under the gasoline purchase program inaugurated last week were scheduled to be made today. Approximately all of the gasoline in the shape of cargoes along the Gulf Coast has been purchased by the participating companies. The legality of that gasoline already bought was questionable, as it is said there was no definite assurance it had not been manufactured from "hot" oil. However, it is now definitely taken off of the market, and the threat to stability, which it carried, is done away with. If steps can be taken to see that such an accumulation does not gather again, one step forward will have been made.

Purchases of gasoline for the month of September will not be as great as it was predicted they would be for the first month due to the fact that the program was not approved by the administrator until so late in the month. Proportionately, however, the purchases for this month are expected to come up to predictions, as it will probably be necessary to purchase something over 1,000,000 bbls. of gasoline before the end of the month.

Stripper Well Defined

A question which has plagued the Planning and Coordination Committee and the petroleum administration almost since the beginning of these two agencies has been an adequate definition of "stripper" wells. Such a well has heretofore been referred to as a well of such small production and low gross revenue that it is impossible to operate under the regular provisions of the code, with reasonable margin for the operator. Section 1 of

(Continued on Page 32)

Approaching Oil Lease Expirations Revive West Texas Drilling Activity

By L. G. E. BIGNELL
Petroleum Engineering Editor

During the height of the East Texas drilling campaign many companies stripped their leases of equipment in West Texas and elsewhere to supply immediate needs in the East Texas Field. Now it is necessary to rehabilitate those leases and this work has been going on in West Texas for the past six months and the results are evident in all fields.

To one who has known this area since the early days of drilling in it this reconditioning of old properties is most encouraging. It has been known that there are thousands of undrilled locations in the many pools within the Permian Basin of West Texas and while it is not anticipated that the great boom of 1924-1927 will be re-enacted it seems very probable that there will continue to be steady operation of leases and completion of new wells for the next four or five years.

It will take that length of time to complete the necessary wells to again place West Texas potentials upon a parity with other districts of Texas. This great district in West Texas, covering many thousands of square miles will be drilled in a conservative manner, but with the production rate of fields in other parts of Texas fixed or declining it is going to be essential that the known productive areas of the Big Lime country be drilled.

There is another very important factor entering into this situation. The original activity of the region started in 1924 and continued on through 1925, 1926 and 1927, with large blocks of land leased from the University of Texas, the companies to whom large land grants were made during the early days of the State, and from cattle companies and other owners of big ranches and farms. The terms of the leases were usually for 10 years, so the expiration dates are close at hand for many and as geophysical prospecting over much of this area has given indications of structures that may contain oil or gas the holding companies are drilling test wells in many localities.

Activity at Odessa

A number of equipment manufacturers and supply dealers have established warehouses in Odessa, Tex., and it appears that this town in Ector County at the cross roads of the principal paved highways serving the West Texas area will become the center of distribution for this region for the supplies and machinery shipped in less than car load lots.

The following companies already have warehouses and stocks in Odessa: Mid-Continent Supply Co., Atlas Supply Co., Frick-Reid Supply Co., Continental Supply Co., Parkersburg Rig & Reel Co., Dunnigan Tool & Supply Co., Hinderliter Tool Co., Lee C. Moore Co., Happy Belting Co., Sunshine Iron Works, Williamsport Wire Rope Co. and Bridgeport Machine Co. Several other companies are to establish headquarters in Odessa as soon as space is available.

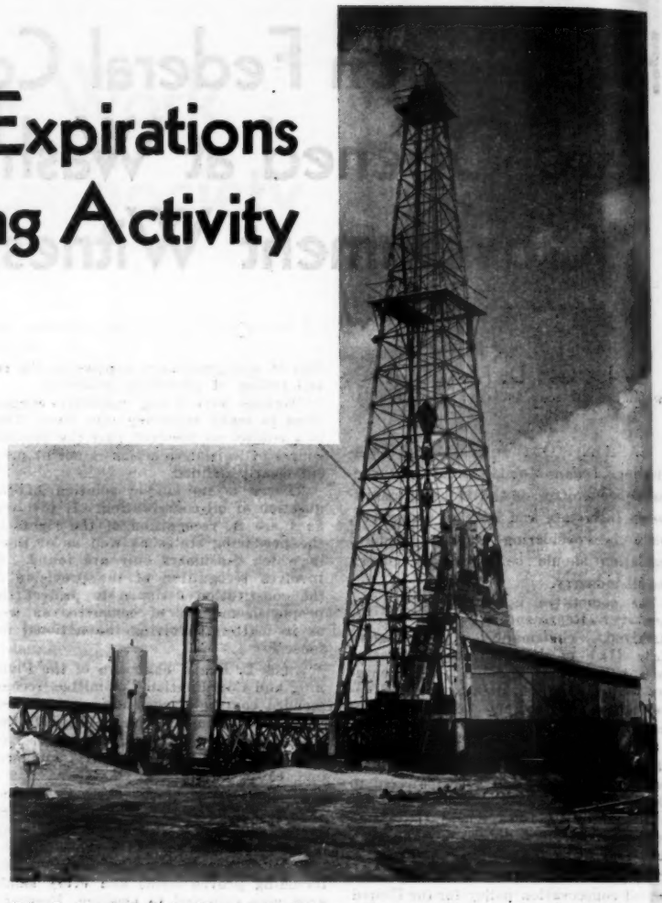
Odessa is located upon the Bankhead highway, the No. 1 route of Texas running across the State from Fort Worth to El Paso. There are numerous paved roads branching off from this main artery of commerce. Roads to Hendricks Pool, Winkler County, run north from Monahans, also a road to Fort Stockton on the south starts from Monahans.

The recently completed Highway 62 enters Odessa from the north after passing through Gaines and Andrews Counties. To the south of Odessa, Route No. 137 leads to McCamey and intermediate points and there are good roads south from McCamey to Iraan in the Yates Field, Pecos County.

A new road is being built from a point north of Andrews, in Andrews County, branching from Route 62 and running to the fields in southeastern New Mexico. Highway No. 83 between Hobbs, N. Mex., and Seminole, Gaines County, Texas, will form a shorter paved route between Odessa and eastern New Mexico.

This network of new roads completed or building is making transportation in the West Texas and New Mexico districts much more satisfactory and reducing time as well as wear and tear upon car and rider appreciably. The contrast between the old roads and the new ones is very marked to one who has driven through the country during the early development days.

There are five deep tests now being



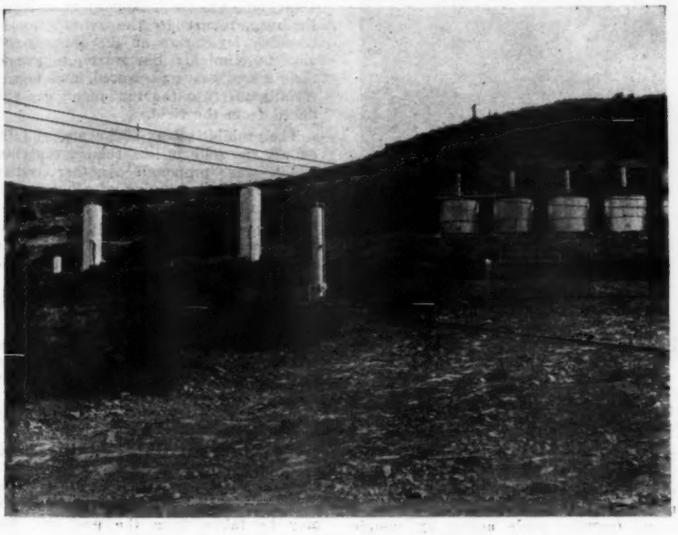
Big Lake Oil Co.'s No. 15-C, Reagan County, Texas, showing hook-up used while completing this deep well producing from the Ordovician formation found below 8,000 feet

Panorama of Discovery Gulch, Yates Field, Pecos County, Texas, taken from the rim rock looking northeast. The tanks in the clearing in the center of the picture serve Marathon Oil Co.'s I. G. Yates "A" lease No. G-30 well which had an initial production of 7,705 bbls. hourly, the largest well ever completed in this country.

drilled in the area and during the past summer several important discoveries have been made while drilling on large blocks of land. Humble Oil & Refining Co.'s No. 1 Means in Andrews County north of Odessa is one of the many important discovery wells. As a result of this test the town of Andrews, county seat, located in the middle of the county bearing the same name, is assuming the proportions of an oil town. The development in this field will be restricted to not more than six wells this year and they are to be spaced not less than one well to 40 acres in accordance with an agreement approved by the Federal oil administrator on August 27.

The North Cowden Field in the Ector County, north of Odessa, has also been covered by an approved drilling program. It is estimated that this field will cover about 10,000 acres and the 40 allowable wells that may be drilled by December 31, 1934, are to be spaced not less than 880 feet apart. This agreement was approved July 17. Lack of water has retarded drilling during the summer, but recent rains have filled the ponds and streams and several new locations have been staked and work is going forward again rapidly.

In the Penwell Field, west of Odessa, five strings of cable tools were operating and one well was finished recently extending the pool to the northwest. The general appearance of this field was most encouraging, the leases are all in good shape and wells producing their allowables.



Large and small separators and bolted steel tank batteries on leases of the Marathon Oil Co. in the Yates Pool, Pecos County, Texas

Continuing along Bankhead Highway west from Penwell, the next area of importance is the O'Brien Pool north of Monahans in Ward County. This is not a new field but there has been considerable work done in the area recently and it is outlined with many inside locations still to be drilled.

One important new discovery is a well recently completed by Skelly Oil Co., No. 1 S. M. Halley well, in a new pay horizon found in a tract north of the O'Brien Pool. This new play found the production at a depth below the sand producing the oil in the O'Brien Field so it is not an extension of that pool. The production in the new area comes from a sandy break in the Big Lime and it is possible that it may be correlated with the producing horizon of the Scarborough Field northeast of Hendricks Pool in Winkler County, or the Shippley Pool south of the O'Brien Field. It is an important discovery but there has not been enough work done yet to prove the size of the pool.

Hendricks Field

Proceeding north along the highway that skirts the west edge of the O'Brien Field and passes Skelly Oil Co.'s new well, the Hendricks Field is soon entered from the south and traversed on a first class highway through its entire north and south axis, with good roads branching off to the east and west throughout the field.

It is reported that Hendricks Field, Winkler County, has produced approximately 177,000,000 bbls. of oil up to July 1, 1934. This field was opened in 1926. At present it is reported that the wells produce 50 bbls. of sulphur water to 1 bbl. of oil. Another report states that the wells produce 96.5 per cent water. Practically all wells flow natural and the biggest problem confronting the operators is finding means of getting rid of this great quantity of fluid that has no value or use in the district.

This field has always presented a number of interesting problems in drilling and producing. Very large wells were completed and they were in many instances produced wide open for long periods so that water put in its appearance in the field early. But as the fluid flows and it is not particularly hard to separate the oil and water wells are profitable to produce.

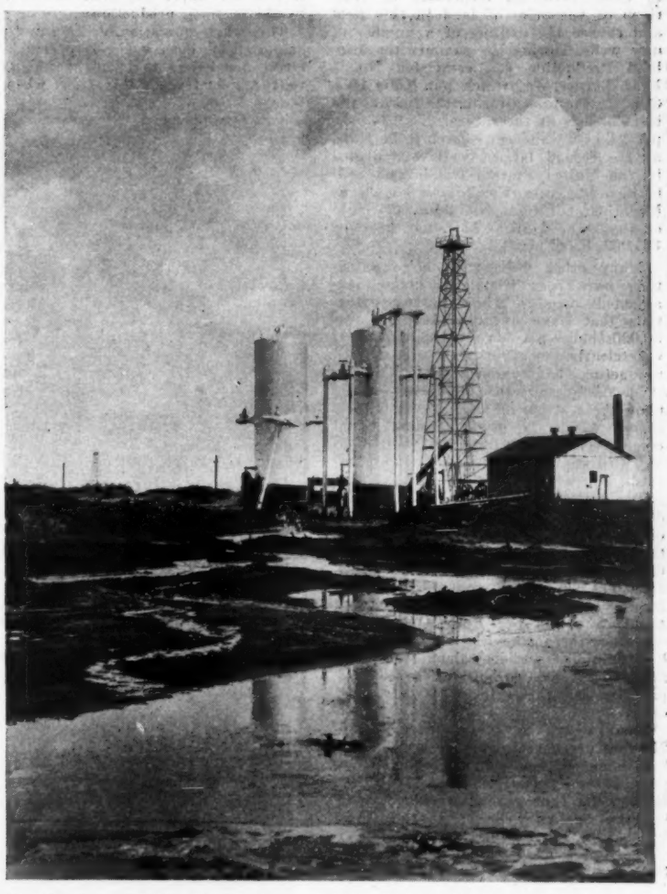
To give some idea of this water problem in one section of the field the accompanying pictures were taken. They show the flow of water from two wells. One well is producing through oil and gas separators and the other is flowing practically water only and spilling on the ground forming the stream seen in the foreground of the picture.

There are five wells on the Lion Oil & Refining Co.'s property in the northwest part of the field that flow an estimated 160,000 bbls. of water daily and from the surface of this good size stream there are about 350 bbls. of oil skimmed daily. The percentage of oil to water is about .00218 but the only cost involved in securing the oil is pumping it from a sump, into which it is diverted with some water, into two settling tanks and then putting the product recovered from the second settling tank through a treating plant where heat and chemicals produce pipe line oil.

The general appearance of the Hendricks Field is pleasing. Lease houses have been painted, tanks and derricks coated for the most part with aluminum paint or some combination of a solid color and aluminum, and the properties cleaned up generally. Aside from the great quantities of water flowing through open ditches into ponds and settling basins in this very sandy area the Hendricks Field will compare very favorably with other pools in the West Texas area.

Crane and Upton Counties

The return trip from Wink was made by way of Pyote, the old center for the warehouses of the manufacturers and dealers in supplies during the period of Hendricks Pool's development. Instead of 12 there are now three warehouses there, and it is reported that the population of this town decreased from about 8,000 during the peak of the boom to 80 two years ago and is now back to about 800 and still increasing.



Sulphur water flowing from wells in the Hendricks Pool, Winkler County, Texas. Discharge from one well may be seen in front of traps.

Monahans, Ward County, is building up rapidly. It is reported that there are about 1,500 people in this important junction town on the Bankhead Highway and that 10 or 15 new houses are being built.

There was an acute shortage of homes in Odessa brought about by the fact that the establishing of new warehouses in that town had caused several families to desire accommodations there. Midland is also experiencing a shortage of residences and it is reported that building companies have plans under way to build a large number of homes in both cities to accommodate this influx in population hoping to have these new houses completed before the winter.

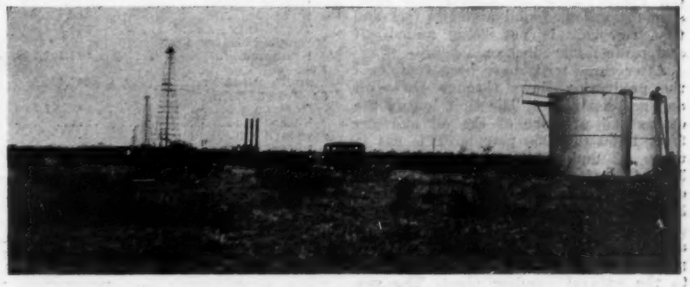
To the south of Odessa the Church-Field and McElroy Pools are located. There are good roads into the fields with Highway No. 137 passing through the district from north to south. Crane, county seat of Crane County, has taken on a new lease of life. Most of the store buildings are occupied. McElroy camp nearby is still the headquarters for the field men of the Gulf Production Co. but it is reported that this company is erecting a central office building in Odessa to serve as a meeting place for the officials and field men.

There is no special excitement in the Upton-Crane County fields. Gulf Production Co.'s No. 103 McElroy, the deep test, was making about 2 feet a day in a hard cherty formation at about 10,735 feet, and drilling ahead.

McCamey, the town built after the discovery by Johnson and McCamey in 1926 still serves as the oil town for this region with Humble Oil & Refining Co. and Shell Petroleum Corp. maintaining field offices there. It is located upon the Orient branch of the Santa Fe Railroad.

Pecos County

The Yates Pool in Pecos County is more than seven years old and about a year ago the courts rendered decisions



Drilling wells and new bolted steel tanks on one of the Sun Oil Co.'s leases in Cowden Field, Ector County, Texas

in cases involving ownership of fractions or vacancies of land in this field and caused the drilling of a number of new wells. During the summer the Midland Production Co. completed No. 1 Fred Turner, Jr., which put 6,600 bbls. of oil in the tanks during the first hour's test. This is at the rate of 158,630 bbls. per 24 hours and can therefore be rated as the second largest well ever drilled in the United States. The largest well is also in Yates Field, now known as Marathon Oil Co.'s No. 30-A, produced at the rate of 7,705 bbls. per hour or 184,920 bbls. per 24 hours.

Many other wells with large potentials have been completed upon these adjusted vacancy tracts having potentials that have averaged in excess of 30,000 bbls. per day which indicates very clearly the advantages of controlled production that has been applied to this field. About 40 wells have been drilled upon these strips or vacancies and their offsets within the past 12 months and recent reports show four new wells drilling, two on vacancy strips and two offsets.

The field is still being produced under controlled drop in pressure and gas-oil ratio. With a lower rate of production set for the field recently the formation pressure dropped 1.2 pounds per 1,000,000 bbls. of oil produced. Previously this rate of pressure decline was about .8 pound per 1,000,000 bbls. of oil when there was less drilling and a higher rate of withdrawal, and about .5 pound per 1,000,000 bbls. when the field produced at the rate of 60,000 bbls. daily.

The present gas-oil ratio is about 246 feet per barrel. Tubing strings have been changed to accommodate formation pressure and production rate variations. Most wells flow through 2-inch tubing but the smaller wells use as small as 1-inch pipe for flow strings.

Many of the older wells in the Yates Pool producing from 80 to 400 bbls. daily with the field average gas-oil ratio flow into oil-gas separators made at the machine shop of the Marathon Oil Co. in Iraan, under the supervision of Frank Redick, master mechanic. These little traps are made out of 15½-inch casing and are 12 feet high. The floats and valves are built into the trap and cannot be tampered with on the lease. The hookup provides for connections for a gas meter to determine gas-oil ratio when making regular flow tests of the wells.

Big Lake Field

One of the most interesting operations being carried on in any oil field at this time is the drilling and completion of the wells producing from the Ordovician formation found at about 8,100 to 8,500 feet depth in the Big Lake Field, Reagan County. E. V. Foran, consulting engineer, making his home at Texon, is in charge of this work and he has described it in a paper presented before the A.P.I. Division of Production meeting held in Fort Worth, Tex., April 20-21, 1934, and published in The Oil and Gas Journal of April 26, page 34.

Mr. Foran and the management of the Big Lake Oil Co. deserve special credit for this work because by controlling the wells at the surface excessive fluid column pressures are not being placed upon the 1,900-pound pressure formations found at 8,100 feet and that reservoir is not being sealed off and made nonproductive.

After these wells have been completed the production flows through three oil and gas separators. The first lowers the casinghead pressure of the oil and gas from 1,400 to 1,250 pounds. This gas is taken off and transported through pipe lines 1½ miles where it is used to flow other deep wells and introduced into the hole at about 1,000 pounds pressure.

The second trap operates at 650 pounds and the third separator is set for 60 pounds discharge. This gas goes direct to the natural gasoline plant. The gas taken off the intermediate separator is delivered to wells drilled to about 3,000 feet in the upper pay zone of the field to aid in their production.

This whole operation, drilling and producing these deep wells, is of much interest and seems to be of special value to the industry at this time when so many deep wells have had what were apparently commercial showings when drilling only to have the wells reported as nonproductive after setting and cementing casing.

Midland and San Angelo still continue to be the two cities within this area that serve as headquarters for the land and lease departments and for the geologists and oil field scouts. The Hogan Building in Midland is reported as filled and most of the space is occupied by offices of the land and geological departments of the major companies, with one or two companies maintaining division offices there.

Everyone encountered was busy. Well samples were to be seen in every geological department office and the lease men were active checking up on company property acquired 8 to 10 years ago, the leases upon which are about to expire and also in securing leases in areas recently made active by completion of geophysical surveys or the drilling of a well.

The University Land office, also the office of the T. & P. Land Co., is located in San Angelo. These two organizations control over 4,500,000 acres of land in the Permian Basin and West Texas areas. Many other large landowners have offices in San Angelo and the oil business is quite active there. Some indication of this activity may be secured from a report that one real estate firm had about 250 rent houses listed this spring and reports none available now.

Every condition seems to indicate that the West Texas area is entering a period of activity that will extend to 1938 to 1940 because drilling obligations will require offset locations be made when production is found. Government permits have been extended in some instances to May, 1936, but it is reported that no further extensions will be granted and the royalty over much of this land is held by persons who are urging that their rights be protected.

The excitement caused by the discovery of East Texas has subsided and the oil men are going back to the area where they know there is still a lot of oil to be secured by drilling wells and producing them and in carrying on this development work thousands of men will find gainful employment for many years to come.

This well in Hendricks Field, Winkler County, Texas, flows nearly clear sulphur water in a steady stream. The flow of water above the master gate on the derrick floor level gives some idea of the rate of flow.

GULF COAST WATER SHIPMENTS, JULY, 1934

Company and terminal—	Crude		Refined		Total
	Coastwise	Export	Coastwise	Export	
Atlantic Pipe Line Co.:					
Atreco	1,317,478.43	169,314.11	7,878.55	.....	1,494,671.09
Texas City	302,783.08	.....	.....	.....	302,783.08
Harbor Island	418,911.73	.....	.....	.....	418,911.73
Gulf Ref. Co.:					
Port Arthur	76,823.01	117,123.62	2,138,632.77	16,221.04	2,348,800.44
Humble Oil & Refining Co.:					
Baytown	1,471,567.00	.....	1,358,002.62	620,914.20	3,450,483.82
Harbor Island	1,966,316.00	.....	.....	.....	1,966,316.00
Ingleside	100,818.00	.....	.....	.....	100,818.00
Texas City	265,556.00	.....	.....	.....	265,556.00
Magnolia Pet. Co.:					
Beaumont	921,200.76	.....	1,857,882.00	.....	2,779,082.76
Pure Oil Co.:					
Smith Bluff	404,468.97	.....	511,547.49	.....	916,016.46
Shell Pet. Corp.:*					
Houston	198,867.19	92,065.12	851,746.45	143,371.93	1,286,050.69
Norco	.....	.....	259,886.38	.....	259,886.38
Standard Oil Co. (La.):					
Baton Rouge	239,334.00	.....	508,606.00	205,437.00	933,377.00
Sun Pipe Line Co.:					
Sabine Pass and Sun	1,508,125.25	.....	.....	.....	1,508,125.25
Texas Co.:					
Port Arthur	1,280,988.00	957,632.00	2,175,024.00	461,015.00	4,874,659.00
Miscellaneous:					
Houston	1,503,529.31	274,006.83	819,090.93	116,896.87	2,713,524.49
Total July	11,976,767.23	1,610,141.73	10,488,397.19	1,563,856.04	25,639,062.19
Total June	10,457,595.21	1,623,160.46	9,930,946.72	2,296,892.81	24,308,595.20
Difference	1,519,173.02	13,018.73	557,350.47	733,036.77	1,330,466.99

*Petroleum coke, Houston (long tons), coastwise, 2,285.

Texas Senate Committee Reports on Sour Gas Law

AUSTIN, Tex., Sept. 17.—A Texas senate investigating committee, which inquired into reported waste of natural gas under the sour gas law affecting the Panhandle gas field, Monday made a preliminary report to the senate, recommending legislation at the January session to eliminate the waste, to exempt from taxes gas repressured, and to materially increase the tax on all gas produced from the field.

The prohibitive tax of 2 cents per 1,000 on all gas sold at less than 4 cents per 1,000 was proposed. Another section would require stripping of all gas within 20 miles of the well.

Senator Will Beck, of Bowie County, filed the report, which was drawn after the committee visited the Panhandle Field and took testimony.

Recommendations contained in the report were:

Ratable taking by pipe line companies and others; and restriction of all the field to ratable taking, including that stripped for gasoline.

A tax of one-half cent per 1,000 feet on all natural gas.

Refund of state tax on gas repressured after stripping.

Ratable taking among all interests in a common pool; and when observed, gas may be taken from the pool only for light and fuel use.

In sour gas areas, special permits allow the stripping of this nonfuel gas, with residue all to be utilized for carbon black.

Further carbon black plants to take gas ratably.

Legislation for lower gas-oil ratio in oil-producing sections of the gas field, and stripping of such gas used to produce oil.

A tax of 2 cents per 1,000 feet on all gas produced and sold at the well at a price of less than 4 cents per 1,000 feet.

Requiring all natural gas to be stripped of gasoline before moving more than 20 miles from origin in pipe line.

That taxes be occupation tax on producing gas, not a tax on the gas itself.

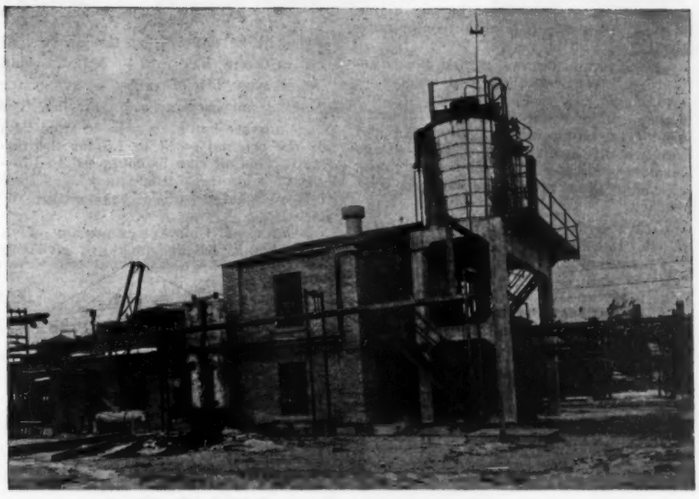
The report said: "We think it safe to say that the so-called waste problem would have been solved long before this if the provisions of the gas ratable taking law had been carried out as the legislature intended, all of which goes to show that conservation is impossible without an equitable allocation of the market requirements."

I.P.A.A. ANNUAL MEETING

The executive committee of the Independent Petroleum Association of America has announced the dates of the fifth annual meeting of the Independent Petroleum Association of America to be held in Fort Worth on Friday and Saturday, December 6 and 7.

The Chlorex Process and the Trend Towards Lighter Lubricating Oils—Result on Pennsylvania Stocks

By D. B. WILLIAMS
Carbide & Carbon Chemicals Corp., New York



Commercial chlorex plant charging 35,000 gallons of oil per day

A recent survey showed that 65 per cent of the lubricating oil sales of one large refiner was S.A.E. 40 grade oil and 25 per cent was S.A.E. 50 grade. Several of the leading automobile manufacturers after conducting thorough tests under various conditions, concluded that lighter oils should be used in automobile engines and that lighter oils (in general not heavier than S.A.E. 30) would not only provide better lubrication, but would insure easy starting in cold weather and better engine performance. Many car manufacturers are now making motor oil recommendations similar to the following to their distributors and dealers throughout the United States and Canada. Like recommendations are also incorporated in the owner instruction manuals furnished with the 1934 models.

Driving conditions—	Oil recommended
High speed at 80° F. or above...	S.A.E. 40
80° F. to 32° F.	S.A.E. 30
32° F. to 0° F.	20 W
0° F. to —15° F.	10 W
Below —15° F.	*10 W

*Plus 10% kerosene.

Although oil consumption will be somewhat higher when lighter oils are used, it has been pretty definitely shown that in general the increased cost to the car owner for oil will be more than compensated for by the saving in gasoline. There is a further benefit from reduced wear of the moving parts as better lubrication is provided during the warm-up period. Although the general use of lighter oils in automobiles is contingent upon public acceptance, considerable propaganda to educate the public to the use of lighter oils has already been circulated. As a result of this and the sale of considerable volumes of the new 10-W and 20-W specification oils during the past winter, many refiners have found, and will find it increasingly more difficult to meet the increased demand for neutral for blending purposes.

If we assume that the domestic consumption of automobile lubricating oil for 1933 averaged S.A.E. 40 grade, this oil could have been composed of 49 per cent 180 neutral and 51 per cent 150 bright stock. If the trend towards lighter oils results in the general public using a lubricating oil averaging one S.A.E. grade lighter or S.A.E. 30 (consisting of 60 per cent of 180 neutral and 40 per cent of 150 bright stock), a market for approximately 22 per cent more neutral and 21 per cent less bright stock is indicated. Furthermore, the sale of lubricating oil during the next few years should improve with improved economic conditions and because of increased oil consumption with the use of lighter grades. For these reasons, facilities for the production of neutral for blending purposes should be taxed to the utmost, and the refining industry may be faced with a problem of no mean proportions. Many refiners have noticed that although there has been a decided increase in the demand for neutral, they were until quite recently able to get rid of their bright stock without much difficulty. This is probably explained by the approach of warm weather, at a time when the heavy lubricating oils were still in demand by a public not thoroughly educated to the use of lighter lubricants and also because of an improved export market for bright stock, which has helped absorb excess production of this grade of oil. The bright stock market is notably weak at present, however.

Mid-Continent Refiners

Those companies refining Mid-Continent crudes are, in general, manufacturing their lubricating oils from a topped crude or "long" residuum having a viscosity of from 90 to 120 at 210° F. This lubricating stock, which may contain 5 to 15 per cent asphalt, is conventionally refined by acid treating and clay contacting or percolation, followed by centrifugal dewaxing. The refined residuum is then reduced to neutral and bright stock for blending to various S.A.E. grades of lubricating oils.

Neutrals of course predominate in the lighter S.A.E. grades and for every gallon of neutral which can be taken from a refined long residuum, a corresponding and quite definitely fixed volume of bright stock is also produced. With an increasing demand for lighter oils it becomes desirable for the refiners to provide sufficient flexibility in their lub plants so that production of neutral and bright stock can be controlled to meet changing marketing conditions. One method would be to take the neutral overhead, preferably under vacuum, from the topped crude before it is refined. Neutral production would then be limited only by the amount of topped crude available from the crude stills and the capacity of the vacuum still. A portion of the residuum from which the neutral is taken overhead may be reduced to bright stock to meet a limited demand for this grade of oil, while the remainder may be charged to the cracking stills, blended with fuel oil, etc. If a raw long residuum is charged to a vacuum still, an overhead cylinder stock can be taken. The asphalt will remain in the bottoms and the overhead will be "clean" and relatively free from asphalt. Overhead cylinder stock may be dewaxed in centrifuges under the proper conditions.

Removal of wax from the light distillates may require the installation of wax filter presses or a solvent dewaxing process. The latter could of course be used for dewaxing cylinder stock or the original long residuum as well as neutral. Wax presses can be installed reasonably and in many cases the stock may be chilled with excess refrigeration which would be available from the centrifugal dewaxing plant if less cylinder stock is dewaxed to meet a curtailed demand for bright stock. In some refineries excess refrigeration is already available.

It does not appear practical to increase production of neutrals by refining more long residuum as this would involve the production of corresponding amounts of bright stock, which may prove difficult to dispose of. The refining of an increased quantity of long residuum is limited by the present capacity of the centrifugal dewaxing plant, in any event.

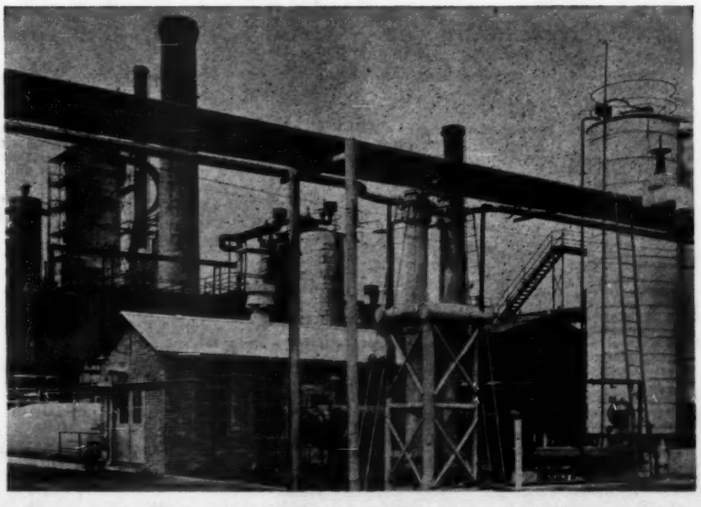
Solvent Extraction

In spite of the fact that solvent extraction may increase refining costs, and involves an extract loss at a time when the refiner is faced with the problem of increasing production, particularly of the lighter grades of lubricating oil, many refiners have installed solvent extraction plants and others are definitely going ahead with a program which involves a total expenditure of something like $5,000,000 for plants and solvents. These refiners feel that solvent extraction is here to stay and that the threat of competition and the necessity of marketing improved oils are factors they cannot afford to disregard. One of the big advantages of solvent extraction is the production of a uniform and superior grade of finished oil independent of crude source. Solvent extraction plants installed and under construction will, it is reported, have a total yearly finished oil capacity of approximately 7,300,000 bbls., and while it is true that these plants will probably not be operated continuously at their rated daily capacity, the above figure represents nearly 43 per cent of the total 1933 production of lubricating oil for domestic consumption.

When solvent extracting a Mid-Continent long residuum, which contains appreciable quantities of asphalt and other undesirable constituents, it is usually necessary to deasphalt the stock before extraction by the use of acid or a second solvent, such as propane. There is some sacrifice in yield when using acid instead of propane for deasphalting, although the physical properties of the finished oil are equally good. In acid treating, however, no additional investment is required for equipment as the present acid treating plant may be used for this preliminary step, thus eliminating the investment required for a solvent deasphalting plant.

By taking their lubricating stocks overhead from the topped crude refiners of Mid-Continent crudes will not only provide greater flexibility in their refining operations to meet the increased demand for lighter lubricating oils, but as these overhead stocks will be "clean" and relatively free from asphaltic materials, they can readily be solvent extracted with a single solvent, such as Chlorex. The Chlorex process because of its simplicity may be installed and operated at surprisingly low cost.

Improvement in the physical properties of refined Pennsylvania oils is desirable and the problem of Chlorex extracting a Pennsylvania long residuum presents no difficulties as such stocks are relatively free of "naphthenic" material and can be satisfactorily treated. The removal of even the small percentage of "naphthenic" material present in lubricating stocks from Pennsylvania crude is important, however, and marked improvement in the finished oil is secured.



Commercial chlorex plant producing 40,000 gallons of finished oil daily showing counter current extraction equipment. Vertical chlorex storage tanks in right foreground

Results Compared

The merits of solvent refined vs. conventionally refined oils have been dis-

cussed by many individuals and groups during the last 18 months. With the trend towards lighter lubricating oils it becomes desirable to improve the quality to meet the new operating conditions—conditions under which lighter oils will be used in engines operating at higher speeds, temperatures, and compression ratios.

Reduction in engine carbon formation is already important and will become increasingly so with the trend toward higher compression ratios. The growing use of the aluminum cylinder head and the general availability of high octane gasoline, indicates that the upper limits of compression ratio have not yet been reached.

In a recent paper[1] by D. P. Barnard, E. R. Barnard, T. H. Rogers, B. H. Shoemaker and R. E. Wilkin entitled "Causes and Effects of Sludge Formation in Motor Oils," results of field tests of a conventionally refined Mid-Continent lubricating oil and an oil of the same viscosity and crude source which had been treated with a solvent, are given. Both oils were tested in tractor trucks used in freight service, motor coaches in city and interurban service and gasoline-electric rail cars. Approximately 750 oil samples were taken at six-week intervals during these tests and the authors concluded that: (1) Sludge deposits on oil filter cartridges were approximately 2½ times greater for the regular commercial oil than for the solvent treated oil. This result quantitatively confirmed laboratory tests on the same oils. (2) Mechanics engaged in overhaul work on equipment used in these tests reported visibly cleaner engines in the case of the solvent treated oil. (3) The tests showed that oil consumption was from 5 to 45 per cent lower for the solvent treated oil than for the conventionally refined oil.

A year ago, improvement in viscosity index of Mid-Continent oils was the important point in considering the various solvent extraction processes. With the use of lighter oils, viscosity index is of lesa significance although when treating a Mid-Continent lub stock it is a gauge of what has been accomplished in improving the other physical properties of the oil. It seems to be commonly agreed that a viscosity index of 100 is sufficiently high and that it is not necessary to go higher. In the case of lubricating stocks from Mid-Continent crude, a higher V.I. would entail extract losses which are disproportionate to the further improvement in V.I. In solvent refining Pennsylvania stocks the chief aims sought are high yields of oils having high sludging resistance and low carbon forming tendencies, and a viscosity index of 115, which is commonly secured with extract losses of only 8 to 15 per cent, is incidental to improvement of the other physical properties.

Chlorex on Mid-Continent Stocks

The suitability of overhead stocks from Mid-Continent crude for extraction with solvents has been emphasized. The results of treating an unfiltered Mid-Continent S.A.E. 20 distillate are given in Table 3. Conditions of extraction were as follows:

Chlorex to oil ratio 1.44:1
Extraction temperature ..... 50° F.
Method: 6-stage continuous counter-current.

Results of Chlorex extraction of a 102 at 210° F. unfiltered dewaxed Panhandle distillate are given in Table 4. Conditions of extraction were as follows:

Chlorex to oil ratio 1.5:1
Extraction temperature ..... 80° F.
Method: 7-stage continuous counter-current

Under the above conditions a good yield of 100 viscosity index oil was secured without the use of acid. The raffinate was finished to a 5- N.P.A. color with the use of only 1 pound of Filtrol contact clay per gallon of oil.

Chlorex on Pennsylvania Stocks

When treating lubricating stocks from Pennsylvania crude with a single solvent, marked reduction in carbon residue value and improvement in resistance to sludging and oxidation may be secured with small losses and low solvent-to-oil ratios. Table 5 gives the results of Chlorex extraction of an unfiltered 180 neutral. Extraction conditions were as follows:

Chlorex to oil ratio ..... .64:1
Extraction temperature ..... 80° F.
Method: 7-stage continuous counter-current

It will be noted from the above that the raffinate has a 2+ N.P.A. color. The oil was "bright" and satisfactory for blending purposes without filtering. The Sligh number has been reduced from 24.3 for the original stock to 1.5 for the raffinate. This oil may be contacted to 1.5—N.P.A. color with 0.1 pound of Filtrol clay per gallon at a temperature of 300° F.

Results of Chlorex extraction of a Pennsylvania bright stock are given in Table 6. Conditions of extraction were as follows:

Chlorex to oil ratio 1.84:1
Extraction temperature ..... 95–100° F.
Method: 7-stage continuous counter-current

Solvent extraction of the above bright stock has increased the percolation yield approximately 40 per cent over the yield secured when percolating the original stock to the same finished oil color. At the same time the carbon residue value has been decreased. The typical Pennsylvania bloom is not affected by solvent extraction.

The improvement in sludging resistance secured by Chlorex extraction of Pennsylvania oils is clearly indicated in Tables 7 and 8, which give results of extraction of two typical blended Pennsylvania oils. Conditions of extraction for results reported in Table 7 were as follows:

Chlorex to oil ratio 2:1
Extraction temperature ..... 80° F.
Method: 3-stage batch counter-current

TABLE 3

Inspections—	Original stock	Raffinate	Percolated raffinate
Vol., per cent yield	100	71 5	.....
Gravity, °A.P.I.	24 0	30.0	30 0
Vis./210° F.	52 7	49.9	49.7
Vis./100° F.	348 1	267.8	263.5
Vis. index	60.5	92 5	92.5
V.G.C.	.853	.815	815
Color—N.P.A.	...	4½–5	*2½–3
Color—true	331	50	11
Pour, °F.	25	30	30
Carbon residue	.17	.02	02
Emulsion test, in 1 hour	2 cc.	OK	OK
Neutralization No.	.35	.14	.12
Indiana sludging time (hours)	16	...	35

*A 2½-3 N.P.A. color on the finished oil is secured by contacting or percolating with 1 pound of Attapulgus clay per gallon of oil. A 3½-4 N.P.A. color on the finished oil is secured with .5 pound of clay.

TABLE 4

Inspections—	Original stock	Raffinate	Filtered raffinate†	Extract
Vol., per cent yield	100	72.6	....	....
Gravity, °A.P.I.	22 9	28.1	28.4	11
Vis./210° F.	103 5	82	79.5	352
Vis./100° F.	1655	825	784	....
Vis. index	75	100.5	100	....
Color—N.P.A.	opaque*	*5½	5—	....
Pour, °F.	0,	10	15	....
Carbon res., per cent	....	....	0 27	....
Flash	545	545	545	545
Fire	625	625	625	625

*85-15 per cent solution. †1 lb. Filtrol contact clay per gallon at 400° F.

TABLE 5

Inspections—	Original stock	Raffinate	Extract
Vol., per cent yield	100	93.1	6 9
Gravity, °A.P.I.	30.8	32 2	18 4
Vis./210° F.	45	44.8	56 7
Vis./100° F.	182	164	647
Vis. index	93	110	3.8
V.G.C.	.814	.808	.893
Color—N.P.A.	3	+2	. ..
Color—Tag Robinson	....	....	⅝
Pour, °F.	25	30	....
Carbon res., per cent	0.022	0.014	....
Flash	415	415	415
Fire	490	490	490
Sligh No.	24.3	1.5	....

TABLE 6

Inspections—	Original stock	Raffinate	Filtered raffinate*	Extract
Vol., per cent yield	100	89 1	....	....
Gravity, °A.P.I.	26.3	27.7	27.8	16 7
Vis./210° F.	163.1	153.6	148 9	377
Vis./100° F.	2630	2226	2137	....
Vis. index	101.0	105.0	104 0	....
V.G.C.	.804	.795	.797	.881
Color—Tag Robinson	⅝	7/16	1⅛	1/16
Pour, °F.	10	15	15	145
Carbon residue, per cent	1.71	1 13	.98	....
Flash	565	565	565	565
Fire	645	645	645	645

*Percolation yield 29 (50-gallon) bbls. viscous oil per ton 60-90 Floricin clay.
†Viscosity pourpoint.

TABLE 8

Inspections—	Original oil	Raffinate	Extract	*Extract percolated
Vol., per cent yield	100	82.6	17.4	17 0
Gravity, °A.P.I.	29.8	31.7	21.4	21.5
Vis./210° F.	63 6	65 3	65 1	64.2
Vis./100° F.	464	454	790	703
Vis. index	106.5	114	42	55
Color—true	66	66	450	66
Color—N.P.A.	5	5—	...	5—
Pour, °F.	30	30	...	...
Carbon residue, per cent	.42	.25	...	
Emulsion No.	565	417	...	...
Neutralization No.	.11	.081	...	...
Indiana oxid. hrs.	57.5	(†)	...	...

*Extract percolated through No. 1 Attapulgus clay—yield 500 gal. per ton.
†No sludge 205 hours.

TABLE 9

Inspections—	Original stock	Raffinate from original stock	Percolated raffinate
Vol., per cent yield	100	88 0	....
Gravity, °A.P.I.	26.1	29.1	29.2
Vis./210° F.	144 5	139.7	140.0
Vis./100° F.	2200	1760	1760
Color—Tag-Robinson	opaque	....	2.0
Pour, °F.	25	55	55
Carbon residue, per cent	2.31	1.47	.59
Flash	540	545	545
Fire	620	620	620
Viscosity index	100	111	111.5

TABLE 7

Inspections—	Original oil	Chlorex treated oil
Vol., per cent yield	100	88
Gravity, °A.P.I.	26.5	28.5
Vis./210° F.	106	101
Vis./100° F.	1301	1091
Vis. index	100	113
Color—Tag Robinson	1 5	1.5
Pour, °F.	10	10
Carbon residue, pct.	1.15	.69
Flash	480	485
Fire	545	550
Indiana oxidation test.	(*)	(†)

*Large amount of sludge 209 hours. Viscosity 5890/210° F. at end of test.
†No sludge 209 hours; viscosity 360 at 210° F. at end of test.

Conditions of extraction for results reported in Table 8 were as follows:

Chlorex to oil ratio 1.5:1
Extraction temperature ..... 100° F.
Method: 7-stage batch counter-current.

The original stock in Table 7 was a blend of Pennsylvania neutral and bright stock refined by conventional methods. Unfiltered neutral and cylinder stock, or bright stock, can be separately solvent extracted in the same plant and afterwards blended for various grades of finished oil. The original stock in Table 8 was a conventionally refined Pennsylvania S.A.E. 30 grade oil.

A very decided improvement in these oils as regards sludging resistance is shown by the Indiana oxidation test results given. At the end of the 209-hour test the viscosity at 210° F. of the untreated oil in Table 7 had risen to 5,890 as compared with a viscosity of only 360 seconds at 210° F. for the treated oil.

Chlorex may be applied to steam refined Pennsylvania cylinder stocks. Table 9 gives typical results on this type of stock. Conditions of extraction were as follows:

Chlorex to oil ratio 2.0:1
Extraction temperature ..... 80° F.
Method: 3-stage batch counter-current

Installation and Operating Costs

Following are tabulated figures giving the installation and operating cost figures for Chlorex plants utilizing both batch shell stills and vacuum distillation equipment for solvent recovery.

Conclusions

With improved economic conditions and the trend toward lighter lubricating oils well established, Mid-Continent refiners should take steps to improve the flexibility of their lubricating oil plants so that production of neutral and bright stock may be controlled to meet an increasing demand for lighter oils. Refiners of Mid-Continent crudes can accomplish this by refining overhead distillates, as this method offers greater flexibility in the operation of a lub plant than the "long" residuum method now in use in many refineries.

Unusually good results are obtained on overhead distillates with single solvent extraction, such as Chlorex. Typical results of Chlorex extraction of distillates of Mid-Continent origin are given. A viscosity index equal to Pennsylvania can be secured with yields of 75 per cent or better. At the same time the resistance of these oils to sludging and oxidation will be materially improved, and better color as the result of Chlorex extracting will guarantee increased percolation or contact clay yields The use of acid will in general be unnecessary when treating Mid-Continent overhead distillates with Chlorex.

Pennsylvania lubricating stocks, residual or overhead, wax bearing or wax free, may be extracted with Chlorex to secure a high yield (85 to 95 per cent) of superior quality oil. The neutral will require little, if any, clay to finish to specification color, and on the bright stocks and cylinder stocks, percolation yields should be nearly doubled. The finished oil will have a high resistance to sludging and oxidation and a low Conradson carbon residue value.

Solvent extraction plants having a

[1]S.A.E. Journal, Vol. 34, No. 5, May, 1934.

RUGGED

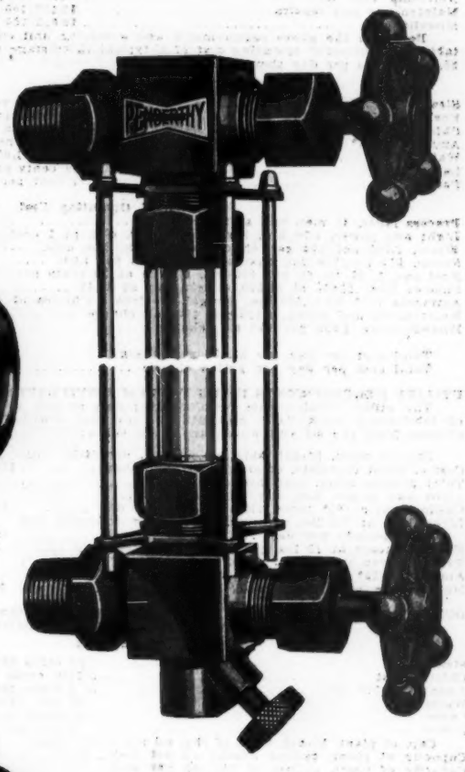
THEY CAN "TAKE IT"

DEPENDABLE operation under the most severe operating conditions is responsible for the universal popularity of these three gages throughout the oil industry. All three can and do "take it"—they are ruggedly built of the highest grade materials by an organization with 48 years experience in the manufacture of quality products. The "All Iron" is made from a modern electric iron alloy, the "Safeguard" from high grade steam metal bronze and the "Navy type" from Navy Bronze Composition M.

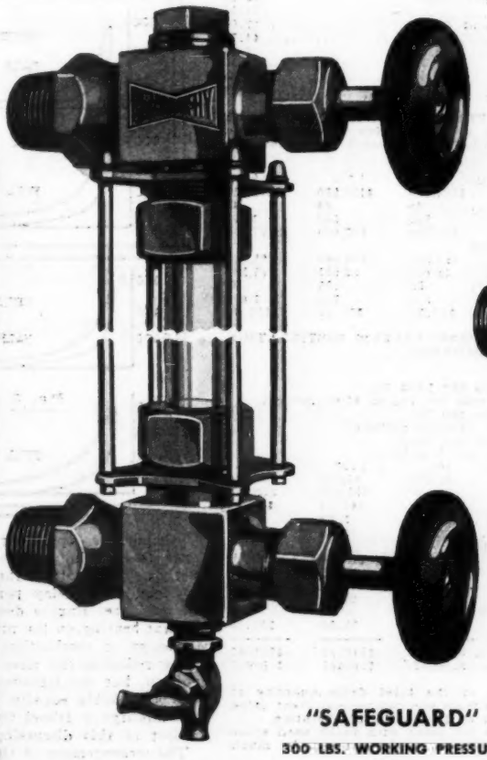
Automatic shut-off is provided on each gage. Upper and lower bodies have ball check valves that seat positively to prevent loss of liquid when glass is broken. The hand operated stop valves are then closed with safety and a new glass inserted.

Every gage is thoroughly tested and carefully inspected at the factory. Write for a copy of the new catalog that gives all the facts.

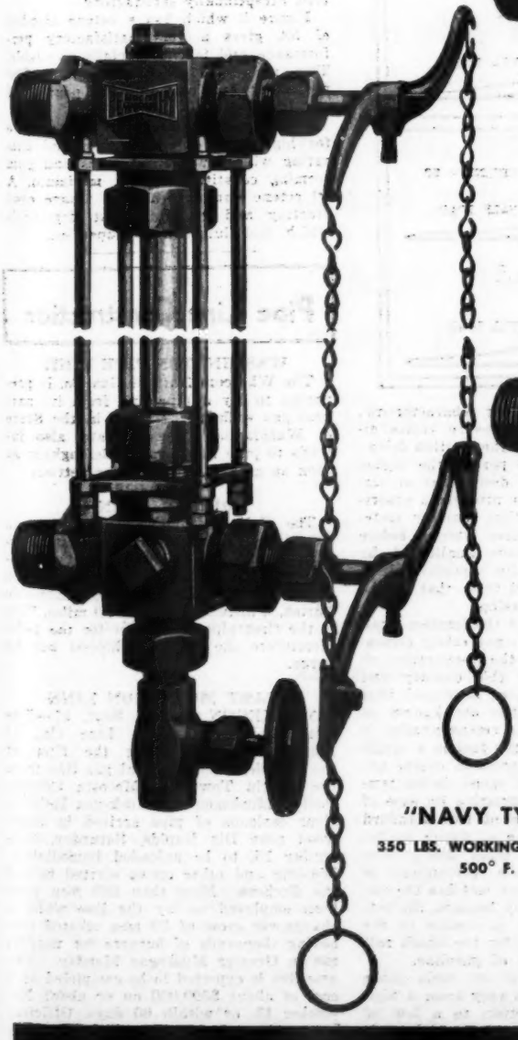
Supply houses everywhere stock Penberthy Liquid Level Gages.



"ALL IRON"
500 LBS. WORKING PRESSURE
750° F.



"SAFEGUARD"
300 LBS. WORKING PRESSURE
500° F.



"NAVY TYPE"
350 LBS. WORKING PRESSURE
500° F.

PENBERTHY PRODUCTS

PENBERTHY INJECTOR CO.

Manufacturers of Quality Products since 1886

DETROIT, MICHIGAN WINDSOR, ONTARIO

yearly finished oil capacity of 7,300,000 bbls. have already been installed or are under construction. Over half of these plants employ single solvents. Three Pennsylvania refiners are operating commercial plants and several others in this region are planning to build solvent plants in the near future. One commercial plant employing Chlorex and having a daily charging capacity of over 1,000 bbls. (50-gallon) of oil, was installed for less than $10,000 new money.

The author wishes to express his appreciation to the Standard Oil Co. (Indiana) and the Mid-Continent Petroleum Corp. for the experimental extractions reported herein, and for their helpful criticisms and suggestions during the preparation of the manuscript.

UTILITY REQUIREMENTS USING BATCH SHELL STILL METHOD

The plant, which cost $44,000 new money, has been operating for over a year under the following conditions:

1. Method of extraction: Three-stage continuous counter-current.
2. Ratio of Chlorex to oil 1.5:1.
3. Method of Chlorex recovery: Batch shell still distillation.
4. Capacity of plant: 35,000 gallons per day of charging stock.

Utility requirements for this plant as it is now operated, are given below:

Total process labor	42 man hrs./day
Light and power	1.76 k.w. hrs./100 gal. charged.
Water	2,200 gal./100 gal. oil charged.
Steam	970 lbs./100 gal. oil charged.
Fuel gas	1,120 cu. ft./100 gal. oil charged
Chlorex lost	0.224% of that used
Ammonia (26° Be.)	0.007 lbs./gal. of condensed Chlorex
Maintenance and repairs	$0.128/100 gal. of oil charged
Miscellaneous	$0.025/100 gal. of oil charged.

Based on the above requirements and assuming unit costs as shown in the following table, the estimated operating cost of a typical three-stage counter-current plant charging 35,000 gallons per day should be as follows:

Assumed Unit Costs

Steam	30 cents per 1,000 lbs.
Fuel gas	20 cents per 1,000 cu. ft.
Chlorex lost	14.5 cents per lb., or $1.45 per gal.
Ammonia (26° Be.)	3 cents per lb.
Water	$6 per 1,000,000 gallons.
Labor	90 cents per hour.
Power	1 cent per k.w. hr.

Estimated Operating Cost

Process labor, 42 man hrs. at 90 cents	$37.80
Light and power, 1.76 k.w. hrs. per 100 gal. chg. at 1 cent	0.20
Water, 2,200 gal./100 gal. charge at $6.00/million gals.	4.60
Steam, 970 lbs./100 gal. charge at 30 cents per 1,000	102.00
Fuel gas, 1,120 cu. ft. per 100 gal. charge at 20 cents per 1,000	75.30
Chlorex loss, .224% of $2,500 (1.5x35,000) at $1.45	174.00
Ammonia (26° Be.) .007 lbs. per gal. condensed Chlorex at 3 cents	11.00
Maintenance and repair, $.128 per 100-gal. charge	44.75
Miscellaneous, $.025 per 100 gal. charge	8.75
Total cost per day per 35,000 gal. charge	$467.40
Total cost per day per gallon charge	$.01335

UTILITY REQUIREMENTS USING VACUUM DISTILLATION FOR SOLVENT RECOVERY

The utility requirements for Chlorex plants of 500, 1,000 and 2,000 (50-gallon) bbls. of lubricating stock daily and utilizing vacuum distillation equipment for recovering Chlorex from the oil and water, are given below:

Cap. of plant, 50-gal. bbls., of chg. oil, per 24-hr. day—	500	1,000	2,000
Cost of plant complete, erected (less oil tankage)	$104,580	$136,980	$202,750
Total process labor, man hrs./day	48	48	48
Light and power, k.w. hrs./day	312	552	1,008
Cooling water (45° temp. rise) gallons per day	324,000	647,500	1,297,000
Live steam at 100 lbs. pressure, for heating, stripping and pumps, pounds per day	192,000	384,000	768,000
Exhaust steam at 10 lbs. pressure, pounds per day	16,800	33,600	67,200
Total Chlorex loss, per cent of that used	.05	.05	.05
Ammonia (26° Be.), pounds per day	350	700	1,400
Maintenance, repairs and miscellaneous expenses, per day‡	$37.50	$75.00	$150.00

OPERATING COST PER GALLON OF CHARGE OIL USING VACUUM DISTILLATION EQUIPMENT FOR SOLVENT RECOVERY

Assumptions

Steam	30 cents per 1,000 lbs.
Chlorex cost	14½ cents per lb., or $1.45 per gal.
Ammonia (26° Be.)	3 cents per lb.
Water	$6 per 1,000,000 gallons.
Labor	90 cents per hour.
Power	1 cent per k.w. hr.

Cap. of plant, 50-gal. bbls., of chg. oil per 24-hr. day—	500	1,000	2,000
Capacity of plant, gallons charge oil per 24-hr. day	25,000	50,000	100,000
Capacity of plant, gallons of Chlorex per 24-hr. day	50,000	100,000	200,000
Labor cost per day, at 90 cents per man hr.	$43.20	$43.20	$43.20
Total power cost per day at 1 cent per k.w. hour	3.12	5.52	10.08
Cooling water cost per day at $6 M M gallon	1.95	3.89	7.78
Live steam, cost per day for heating, stripping and pumps at 30 cents per 1,000 lbs.	57.60	115.20	230.40
Exhaust steam, cost per day	5.04	10.08	20.16
Cost of Chlorex loss per day at $1.45 per gallon*	37.00	74.00	148.00
Ammonia, cost per day at 3 cents per lb.†	10.50	21.00	42.00
Daily maintenance and repair cost at 15 cents per 100-gallons of charge oil‡	37.50	75.00	150.00
Total cost per day	$195.91	$347.89	$651.62
Total cost per day per/gal. charge oil	$.00782	$.00695	$.00652

*Chlorex loss is conservatively estimated at .05% of the total daily quantity of Chlorex charged to the plant. Actual Chlorex loss figures from one commercial plant using vacuum distillation equipment was .0269% over a period of 11 months of operation.

†Ammonia consumption is based on the requirements for plant with batch shell stills. Actual daily ammonia cost for plant using vacuum distillation equipment will be much lower.

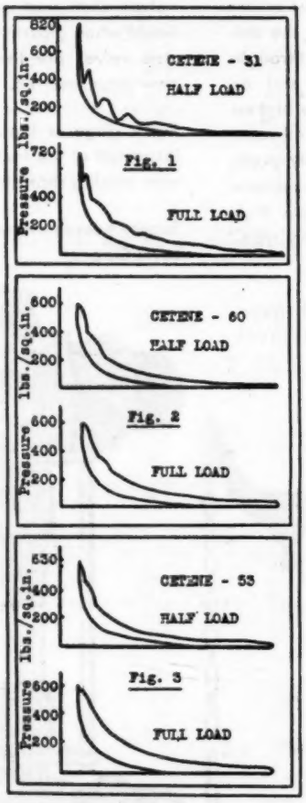
‡Maintenance, repair and miscellaneous expenses charged to these plants are estimated to be the same as for a plant using batch shell still method of solvent recovery, and are very conservative for vacuum operated Chlorex plants.

SUMMARY OF STATEMENTS RELATING TO BUSINESS OF VARIOUS EASTERN PIPE LINES FOR MONTH ENDING JULY 31, 1934

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	542,100.98	315,528.64	1,035,518.14	531,413.62	732,565.03
S. W. Pa. P. L.	449,052.90	80,653.40	898,992.77	644,424.30	388,295.87
Eureka P. L.	884,401.43	276,324.92	272,138.27	289,262.19	284,776.64
Buckeye P. L. (Macksburg)	254,030.00	251,447.78	170,447.78	303,331.98	116,686.43
Buckeye P. L. (Lima, etc.)	2,537,823.20	11,768.14	228,535.27	1,456.80	246,143.44
Buckeye P. L. (Cleveland)	57,482.11	66,116.92	2,100,822.87	1,479,102.03	762,261.26
Indiana P. L.	413,297.94	.....	1,295,755.50	1,051,171.72	269,706.44
Pure Oil Co.	728,073.00	734,578.00	45,998.00	789,498.00	.....
Southern P. L.	90,419.30	.....	52,610.53	45,997.94	36,469.01
Bradford Transit	286,919.35	495,121.14	10,001.70	508,881.75	3,241.15
N. Y. Transit	77,812.91	34,078.69	156,825.65	211,441.31	.....
Northern P. L.	145,332.82	.....	437,265.77	124,201.28	353,972.06
Tide Water P. L.	835,790.87	22,165.58	455,119.68	422,428.28	.....
Tuscarora Dev.	4,198.28	.....	.....	253,182.28	.....
Valvoline P. L.	97,264.79	75,012.90	.....	47,458.26	25,881.67
Other companies	107,678.17	315,439.13	1,123.10	233,289.51	.....
Total July	7,515,907.01	2,681,237.54	7,161,265.03	6,845,441.15	3,214,098.97
Total June	7,578,364.12	2,649,052.33	7,168,106.74	6,806,869.78	3,266,635.71
Difference	62,457.11	32,185.21	6,841.71	38,571.37	52,536.74

Cetene Number Developed to Express the Ignition Quality of Diesel Fuel

The mechanism of combustion in a solid-injection compression-ignition engine, according to the best informed authorities, takes place in three stages. Starting from the commencement of injection, the first stage is a delay period during which no appreciable combustion takes place and the fuel is heated up to its ignition point. In the second stage, the fuel that has been injected during the delay period burns rapidly. The third stage comprises the instantaneous ignition of the remainder of the fuel as it enters the burning gases. Therefore, it is seen that the delay period is an extreme-



ly important operating characteristic, since the maximum pressure varies directly as the length of the ignition delay; the longer the delay period, the higher the pressure. Engine design has an important bearing on the problem, a superior design of combustion chamber materially reducing the time interval before ignition, but the ignition quality of the fuel is probably equally important. It is this quality of Diesel fuels that is the subject of this discussion.

The measurement of the ignition quality of a given fuel is not easily accomplished, but, through the co-operative effort of engineers in this country and abroad, a test has been developed that rates the fuel by what are known as "cetene numbers." The cetene number is obtained by running the fuel in a single cylinder variable compression engine under fixed conditions of speed, jacket temperature, etc., and comparing its ease of ignition to a mixture of two standard hydrocarbon fuels, one of which ignites readily (cetene), the other poorly. The cetene number is the percentage of cetene in the blend that matches the unknown sample. In many respects, the performance of the test is similar to the now standardized test for the knock rating (octane number) of gasoline.

The cetene numbers of fuels made from American crudes vary from a high of 60, or slightly better, to a low of about 30, although certain special products may run outside of these limits. A well designed high speed Diesel engine should be able to run smoothly at all loads and speeds on a fuel having a cetene number of 50, although some engines may be noticeably rough when running under light loads even with a 60 cetene fuel. Other engines will give acceptable performance when run on 40 or 45 cetene fuel. This is particularly true of central station equipment which is generally slow speed and operates at constant load.

The actual engine performance rating of a Diesel fuel is most important. In order to see how this service performance may be predicted from the laboratory engine rating (cetene number) a series of fuel tests were run in Diesel engines to determine the minimum cetene number for best commercial performance. The indicator cards, Figures 1, 2 and 3, are selected to show the effect of cetene number on smoothness of operation and how excessive pressures are built up due to faulty combustion.

Fagure 1 shows an indicator card on a Diesel fuel with a cetene number of 31; a maximum pressure at half-load of 820 pounds and at full load a maximum pressure of 720 pounds, with a very irregular curve throughout the expansion stroke.

Figure 2 is a high-grade noncommercial type of fuel, having a 60 cetene number and shows a maximum pressure at half-load of 600 pounds, and at full load also 600 pounds. The type of burning is very smooth and the operation is considered exceptionally satisfactory.

Figure 3 which has a cetene number of 53, gives a very satisfactory performance and is commercially available. This shows a pressure of only 630 pounds at half-load and 600 pounds at full load.

A 50 cetene number fuel is desirable for high speed Diesel engines and this rating will reduce unsaturates and gum forming constituents to a minimum. A 50 cetene number will also insure easy starting and guard against dry fuels which lack lubricating properties.

Pipe Line Construction

WASHINGTON PIPE LINE

The Whatcom Natural Gas Co. is preparing to lay a pipe line from its natural gas wells to Ferndale in the State of Washington. The company also intends to pipe the town of Bellingham as soon as a franchise has been settled.

LOUISIANA LINE

The Gulf Refining Co. is laying an old 6-inch screw line from the East Hackberry Field in Cameron Parish, Louisiana, to connect with the company's main system in the Vinton Field, Calcasieu Parish, a distance of about 20 miles. This is the first pipe line outlet for the field. Heretofore the oil was shipped out by barge.

START MUSKEGON LINE

MUSKEGON, Mich., Sept. 17.—The American-Michigan Pipe Line Co., of Muskegon, started laying the first of the 55-mile, 8-inch natural gas line from the Austin Township, Mecosta County, Pool to Muskegon and Muskegon Heights. Four carloads of pipe arrived in Stanwood near Big Rapids, Saturday, September 15, to be unloaded immediately. Welding and other crews started behind the ditchers. More than 200 men have been employed to lay the line while a changeover crew of 70 men started preparing thousands of burners for natural gas in Greater Muskegon Monday. The new line is expected to be completed at a cost of about $500,000 on or about November 15, or within 60 days. Officials have set a goal of laying one to two miles daily.

for two bits

Two bits' worth of gasoline—how far will it take the family on a Sunday afternoon?

That's what millions of car owners want to know today—and they buy gasoline accordingly

Dubbs refiners can tell them that Dubbscracked gasoline has more miles per gallon—more miles per two bits —and quieter miles

And the customers come back because it's true

Dubbs refiners are taking gallonage from their competitors every day because they make better gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
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NEWS FROM FOREIGN LANDS

ARGENTINA

Although the damage to the Compania Argentina refinery of the Compania Nacional de Petroleo (National Oil Co.) as a result of explosions and fires starting August 28, was heavy, it was not as great as indicated in early reports. The cause of the fire has not been officially explained. The fire started following a terrific explosion at 2:44 a. m. Tuesday, August 28. Immediately afterwards fires started at three distinct locations in the refinery.

The explosion and fires practically wrecked all the buildings, tankage and equipment in the western part of the plant. All of the refinery's fire service equipment was out of commission at the start of the fire. The refinery was equipped with two foam pump houses and two boiler houses in different locations as well as complete water supply and steam supplies for extinguishing fires. The explosion wrecked the fire fighting equipment and also the main steam lines and all oil and power lines west of the railroad track including most of the tankage and due to this fact it was difficult for employes to get equipment in shape to stop the spread of the fire.

Despite this handicap shortly after the fire started arrangement was made to obtain steam from floating equipment on the Parana river which made it possible for the plant management to utilize steam and water in extinguishing fires at various locations in the plant.

On the west side of the plant most of the atmospheric and vacuum distillation equipment was destroyed including tanks, lines and buildings. In the eastern part of the plant, the cracking equipment, gas absorption plant, naphtha treating plant and lubricating oil plant were only slightly damaged. The large tank farm about a half mile from the refinery was not damaged and after pumping equipment had been installed some of the oil from the refinery which had not been burned was pumped to the tank farm.

A final check showed that three persons had been killed and several injured.

All equipment destroyed by the explosion and fire which is necessary in the operation of the refinery is to be replaced immediately.

The new refinery of the Ultramar Petroleum Co., Inc., located at Buenos Aires has been completed and is now operating on a settled basis. The refinery has a crude oil capacity of 4,000 bbls. daily and is complete in its operations including cracking and facilities for the manufacture of lubricating oils. Construction work on the plant which adjoins the Shell refinery at Buenos Aires started last year.

The Ultramar Petroleum Co., Inc., is owned jointly by the Texas Co. and the Socony-Vacuum Oil Co., Inc., and representatives of both companies are officers of the company which was organized for the purpose of building and operating the refinery. The products of the refinery will be distributed by the marketing subsidiaries of the Socony-Vacuum and the Texas Co. in Argentina and other South American countries.

PERSIA

Production of crude oil in Persia during August was higher than any month this year. The total for the month was 696,066 tons, which compares with 653,893 tons in July. Figured on a basis of 7 bbls. to the ton the daily average production was 157,620 bbls. in August and 147,600 bbls. in July. The total production for the first eight months of this year was 5,061,703 tons.

U. S. S. R.

The July report covering crude oil production and refinery operations in the U.S.S.R. for July shows a general increase in activity when compared with the June operations and also July, 1933. As shown in the accompanying table, the accumulative figures covering the seven-month period also reflect the increased operations in all branches of the industry when compared with the same period in 1933.

Calculated on a basis of 7 bbls. to the ton, the July crude oil production averaged 465,430 bbls. daily, a gain of 21.6 per cent when compared with the average daily production in July, 1933. The June average for this year was 461,200 bbls. The July average was the largest of any month this year.

In the refinery end, the crude runs to stills of the refineries in the U.S.S.R. averaged 411,100 bbls., a gain of 15.6 per cent over the 355,500-bbl. average in July, 1933. As shown in the table, the gasoline output in July was actually less than in July, 1933, despite the increased crude run to stills. This is due in part to the fact that emphasis is being placed on the production of kerosene, the heavier overhead oils and residual fuel oils, for which there is a greater demand in the U.S.S.R. with the supply available for domestic consumption less than the demand.

It will be noted in the table that there has been a large gain in drilling activity. The July drilling represented a gain of almost 89 per cent over July of last year. The accumulative gain for the seven-month period this year was 78 per cent.

Most of the increased drilling has been in the older producing areas, where proven areas are being drilled and old wells deepened to secure larger production. This class of drilling in July was more than 100 per cent greater than in July, 1933.

In relation to the government plan, all phases of oil operations are running behind, although the July drilling was 98 per cent of the plan as announced the latter part of last year. In the production end, the July output was only 82.3 per cent of the plan and for the seven-month period 83.3 per cent. Refinery operations are running about 90 per cent of the plan, although the July gasoline output was 79.4 per cent.

According to official reports of the government domestic consumption of petroleum products in Russia are running about the same as last year. These figures considered with those showing the gain in production and the smaller exports point to a large increase in stocks. The following table gives the consumption of refinery products for the first six months of 1934 and 1933 (data in metric tons):

	1934	1933
Gasoline	254,242	432,261
Kerosene	1,608,727	1,614,261
Lubricating oil	512,304	529,008
Fuel oil and gas oil	3,715,086	3,796,751
Total	6,379,359	6,372,274

PETROLEUM IN THE U.S.S.R.
Preliminary Figures for July, 1934, and Revised Figures for June, 1934

Production of Crude Oil

	July, 1934	Pct. of plan	June, 1934	July, 1933	7 Mos., 1934	Pct. of plan	7 Mos., 1933	1934 pct. of 1933
Azneft	1,624,500	88.8	1,593,600	1,198,500	10,863,200	87.5	7,898,100	137.5
Groszneft	290,500	65.5	280,200	393,500	2,183,300	68.3	3,012,200	72.5
Maineft	72,600	83.5	66,600	52,800	495,000	97.8	331,800	149.2
Embaneft	22,400	64.0	22,100	17,200	136,500	85.8	114,900	118.8
Other trusts	32,500	50.0	32,200	33,100	269,300	54.2	317,100	66.0
Total	2,042,500	82.3	1,994,700	1,695,100	13,887,300	83.3	11,674,100	118.9

Drilling (in Meters)

Azneft	67,985	102.2	62,377	31,524	449,461	98.9	263,399	170.6
Groszneft	25,210	105.5	24,526	13,540	154,016	90.3	64,757	237.8
Maineft	5,237	99.8	4,610	4,539	31,695	69.4	22,360	141.7
Embaneft	6,999	116.7	7,523	3,675	26,059	63.6	22,824	114.2
Other trusts	16,368	73.7	17,160	11,298	107,976	78.0	58,397	184.9
Total	121,899	98.3	116,196	64,576	769,207	90.5	431,737	178.2
Consisting of:								
Product'n drilling	80,650	95.7	76,267	37,106	539,065	92.3	274,451	196.4
Wildcatting:								
Producing fields	26,938	127.9	23,957	14,930	142,262	98.7	94,171	151.1
New areas	14,311	76.6	15,972	12,540	87,940	72.1	63,115	139.3

Runs to Stills

Azneft	1,145,500	100.1	1,120,200	1,071,400	7,859,500	101.0	6,981,100	112.6
Groszneft	641,000	76.7	643,200	468,600	4,194,200	76.2	3,443,300	121.8
Aviafuel	30,700	97.2	19,000	30,600	135,500	91.7	157,400	86.1
Sredazneft	3,500	38.9	5,400	3,800	22,700	40.9	24,300	93.4
Total	1,820,700	90.1	1,778,800	1,574,400	12,211,900	90.5	10,606,100	115.1

Production of Gasoline

Azneft	93,400	99.2	100,100	86,800	611,200	96.0	552,500	110.6
Groszneft	132,000	75.4	152,100	142,300	985,100	88.8	982,900	100.2
Aviafuel	2,100	12.5	1,800	2,700	14,000	48.7	14,400	97.2
Sredazneft	400	42.1	600	300	2,400	43.8	1,900	126.3
Total	227,900	79.4	254,600	232,100	1,612,700	90.6	1,551,700	103.9

(C) International News Photo.

Aerial view of the fire at Campagna, Argentina

PERU

According to International Petroleum Trade a company is being formed in Lima, Peru, to distribute liquid gas containing butane and propane which will be purchased from the International Petroleum Co., a subsidiary of the Imperial Oil, Ltd., of Canada. The International is a large producer in Peru and operates natural gasoline plants from which the liquid gas is obtained.

According to the government report: "A contract has been made between the syndicate and the International Petroleum Co. for the furnishing of the gas and upon the formation of the corporation the company will erect a special plant at Talara, Peru, for the liquefying under pressure of the propane and butane taken from the natural gas. The time required to build this plant will be less than four months. The liquid gas will be shipped to Callao and other centers of distribution in steel cylinders containing 60 to 100 pounds of liquid gas under pressure of 125 pounds to the square inch. No extensive outside pipe line systems or gas mains will be necessary.

"The corporation expects eventually to supply between 4,000 and 5,000 consumers in Lima and Callao. It also contemplates business from the provinces where the absence of all facilities for lighting and heating other than the most primitive, makes the installation of this service especially attractive.

"At present the cities of Lima and Callao are illuminated by electric light. Kerosene lamps and candles are used to a limited extent by the poorer classes. Electricity is also employed for the operation of many household appliances such as cooking stoves, water heaters, etc. For cooking purposes kerosene and gasoline stoves are used on a considerable scale."

MEXICO

The Ministry of National Economy of Mexico has announced that approximately 5,000,000 pesos in stock issues have been subscribed by 1,300 Mexican investors in the new government controlled company to be known as Petromex. The government subscribes to the Class A shares and the citizens to Class B shares.

The government, which has sponsored the sale of the stock, has called for an organization meeting at which officers will be elected. The corporation expects to engage in all branches of the oil business in competition with private interests.

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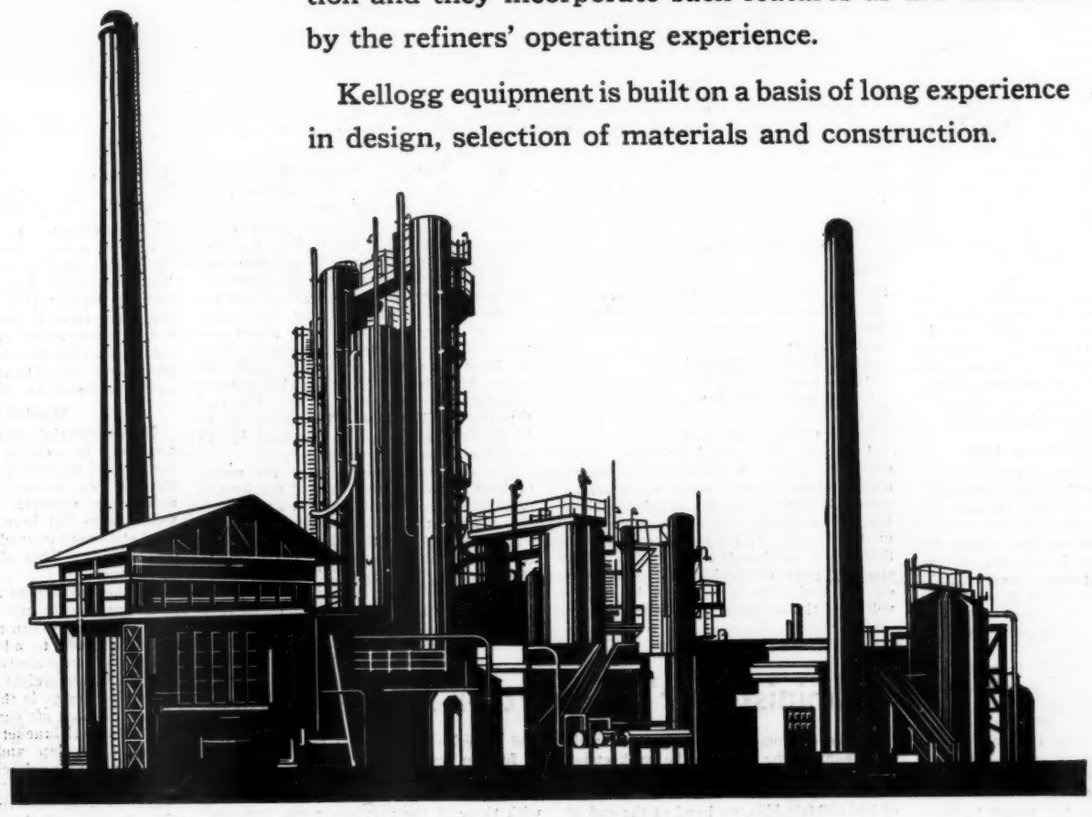

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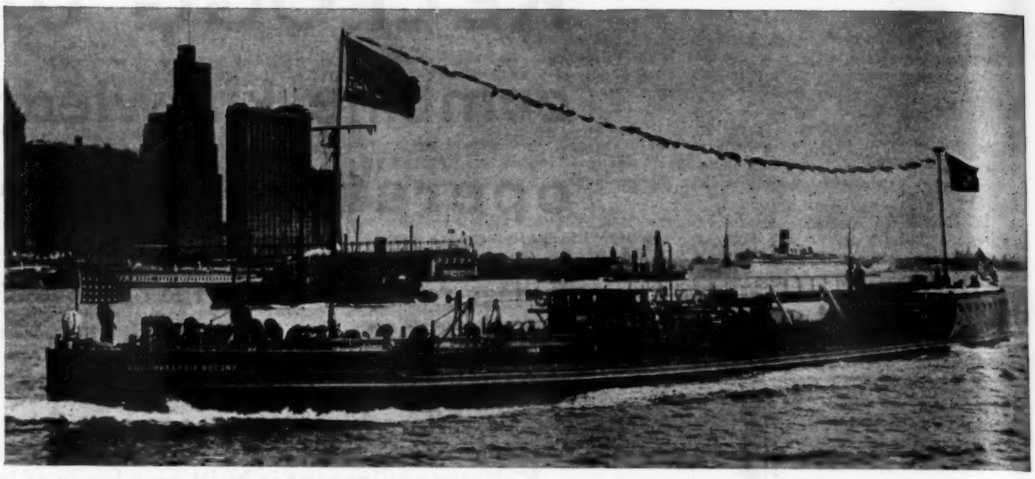
Socony-Vacuum Motor Tanker Largest All-Welded Merchant Vessel in U. S.

By C. O. WILLSON



Largest welded vessel built in United States owned by the Socony-Vacuum Oil Co. Inc., and placed in New York Canal and Great Lakes service, September 1. View shows the motor tanker in New York harbor

Starting the first of the month, the marine transportation department of the Socony-Vacuum Oil Co., Inc., placed in regular operation the largest all-welded merchant vessel ever built in the United States. The motor tanker, called the "Poughkeepsie-Socony," marks another innovation brought about by the marine department of the Socony-Vacuum company, a pioneer in the design and use of motor-driven ships for inland water and coastwise service and now the largest of the American merchant marine in number of vessels and third in gross tonnage.

The new vessel is part of what is probably the largest ship-building program by private interests of the year. The Poughkeepsie-Socony is the third of its size to be launched by the company this summer at a total cost of approximately $1,000,000. In addition, the company has two large ocean-going tankers under construction at a cost of $4,000,000 to be launched the early part of next year. These mammoth tankers, which also have unusual features, will be 500 feet long, 65 feet 9 inches beam, 37 feet depth, with a total deadweight of 15,285 tons on 29 feet 10¼ inches draft. The total capacity of each tanker is 5,330,000 gallons, or 127,000 bbls.

These tankers and the smaller motor tankers are important additions to the Socony-Vacuum fleet of vessels, which at present total 241 in world-wide service, not including 6 vessels on long-time charter and 19 operated by foreign subsidiaries. The fleet includes 18 of these Diesel-driven motor ships, of which 13 are twin screws and five single screw.

Advantages of Welded Hull

Several advantages are claimed for the design with the all-welded hull. Economy in construction was obtained through the substitution of 105,000 feet of electric welding for a quarter million rivets, the latter being necessary in the riveted type construction. Fifty tons are saved in the weight of the tanker and it is estimated that in the course of a year this will mean a "free" trip once a year from the standpoint of operation.

The owners also believe that the all-welded design will have certain advantages in canal and Great Lakes transportation, where it is now in service. During the open season the vessel normally will pass through canal locks approximately 2,600 times. In the case of the New York barge canal these locks are 45 feet wide and the motor tankers fill this space with their width of 41½ feet. The bottle-tight construction obtained in the Poughkeepsie-Socony with absence of rivets or caulked seams will facilitate movement through the locks and the canal.

The two riveted sister ships of the Poughkeepsie-Socony, which are known as the New Haven-Socony and Plattsburgh-Socony, are largely duplicates in design except for the welded feature. The New Haven is now in service between Chicago and Detroit, and the Plattsburgh is transporting finished petroleum products along the New York Barge Canal connecting to the Great Lakes system. The operations of the Socony-Vacuum with its important subsidiaries operating out of Chicago, Detroit, Buffalo and other important shipping points are especially adapted to take full advantage of inland water transportation and the company has gradually expanded its operations over the past few years. With the close of the transportation season about December 15, the new motor tankers, along with older vessels, will be placed in coastwise service until next spring.

Main Features

Those familiar with the design of tankers and barges would find much of special interest in the three new Socony vessels. The main features of the small tankers are:

Overall length—260 feet.

Gross tonnage—1,242.

Capacity—13,500 bbls. on a draft of 12 feet.

Beam moulded—40 feet.

Propulsion is secured by twin screws, each connected to a 375-b.h.p., 6-cylinder, direct reversible, air injection, Diesel engine. Electricity is generated for lighting and pumping and other power uses on the vessel. Fire protection is secured through a carbon-dioxide system. The steering gear of double ran, link type, electric hydraulic is operated by a 120-volt electric motor and hydraulic pump.

The pumping equipment as listed by the marine department is as follows: For circulating water and fire purposes, two bronze lined rotary pumps, capacity 185 gallons per minute; for fuel oil transfer, one rotary brass pump direct connected to a direct current motor; for bilge suctions, three rotary pumps, 26 gallons per minute at 455-foot head; for lubricating oil, one rotary pump driven by direct connected motor; for cargo, two pumps fitted to handle gasoline, capacity 1,000 50-gallon bbls. per hour, driven by 120-volt variable speed electric motors. The fuel capacity is 300 bbls. The speed is 10 knots and the vessel is operated by 18 men including officers and crew.

The unusual appearance of the motor tankers is partially accounted for by the requirements of canal transportation with the fixed bridges spanning the canal. This accounts for the absence of masts, the low deck structure and the squat pilot house. The captain's quarters instead of being adjacent to the pilot house are located aft in the enclosed poop. Living quarters for officers and crew are located at that point.

The hull is divided by bulkheads into 13 compartments including forehold, motor room, pump room, seven cargo tanks, fuel tank, engine room and after peak. The engines in three new vessels are the same as those which have been in service for some time in 10 other tankers. So far as possible the company attempts to standardize its marine equipment so that parts are interchangeable and maintenance problems are simplified.

Welded Design

No substantial changes in design were necessary in welding instead of riveting the hull of the motor tankers. However, the 50 tons weight was saved without sacrifice of strength. In the case of the welded ship flat bars were used as bulkhead stiffeners instead of the usual angles or channels. This also does away with the flanges.

Another advantage as explained by the designers lies in the fact that the flat bars are thicker than the standing flanges and this tends to add to the corrosion-resistance compartments in which oil is stored. Other weight saving features of the welded design is the use of the welded horizontal plate stringers in the bulkhead with the usual bracket arrangement eliminated. The lap and seam widths of plating are reduced with the elimination of connection clips.

The welding feature was extended to other features of the vessel construction including deck fittings, awning supports and the double roller chocks.

Pioneer in Canal Transportation

The marine department of the Standard Oil Co. (New York), now a part of the Socony-Vacuum company, started transporting oil in the New York Barge canal in 1920. Barges of the conventional design then common in the New York harbor area were used. The company had large distribution in New York State and terminals were established along the canal. The following year the company placed in service five barges which were driven by gasoline engin s These barges were at first 150 feet long but after one season's trial they were increasd to 190 feet.

In 1923 the company placed in service a Diesel driven barge which was 254 feet long. This operation proved highly satisfactory and the following year eight Diesel driven barges were built. These were 260 feet long, the maximum length possible for canal operation.

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended September 8 totaled 334,485,000 bbls., a decrease of 1,854,000 bbls. from the total of 336,339,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease, which followed an increase of 250,000 bbls. during the previous week, comprised a decrease of 1,576,000 bbls. in stocks of domestic crude and a decline of 278,000 bbls. in stocks of foreign crude.

Current reports of the industry for the week ended September 8, in comparison with those of the previous week, indicate that daily average crude production decreased 18,000 bbls. and that daily average imports decreased approximately 67,000 bbls. Crude runs to stills, which continued to decrease, averaged 2,390,000 bbls. daily for the week ended September 8, a decline of 130,000 bbls. from the average of the previous week.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies Sept. 1, 1934 (bbls.)	Stocks held by reporting companies Sept. 8, 1934 (bbls.)	Change from Sept. 1, 1934 (bbls.)
Pennsylvania Grade	4,732,000	4,744,000	+12,000
Other Appalachian, including Kentucky	1,118,000	1,141,000	+23,000
Lima-Northeast Indiana-Michigan	1,403,000	1,368,000	—35,000
Illinois-Southwest Indiana	11,537,000	11,394,000	—143,000
North Louisiana and Arkansas	10,217,000	10,240,000	+23,000
West Texas and Southeast New Mexico	29,311,000	29,530,000	+219,000
East Texas	26,891,000	25,948,000	—943,000
Other Mid-Continent	158,410,000	157,810,000	—600,000
Gulf Coast	18,205,000	18,265,000	+60,000
Rocky Mountain	27,743,000	27,706,000	—37,000
California*	33,874,000	33,719,000	—155,000
Total domestic crude	333,441,000	331,865,000	—1,576,000
Foreign crude	2,898,000	2,620,000	—278,000
Total crude	336,339,000	334,485,000	—1,854,000

FIG. 106-A
Std. Bronze Renewable Disc Globe—150 lb. WSP.

FIG. 117-A
Std. Bronze Renewable Disc Horizontal Check—150 lb. WSP.

FIG. 750
Bronze Regrinding Globe—200 lb. WSP.

FIG. 762
Bronze Regrinding Swing Check—200 lb. WSP.

FIG. 890
Iron Body Bronze Trimmed Regrinding Globe—150 lb. WSP.

JENKINS VALVES

FIG. 352
Std. Bronze Renewable Disc Swing Check—150 lb. WSP.

FIG. 896
Iron Body Bronze Trimmed Regrinding Horizontal Check—150 lb. WSP.

FIG. 370
Std. Bronze Solid Wedge Gate—125 lb. WSP.

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FIG. 128
Extra Heavy Bronze Renewable Disc Globe—300 lb. WSP.

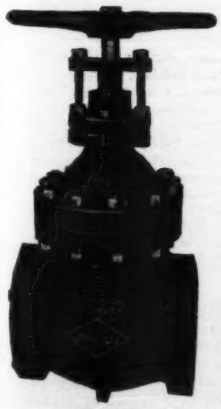

FIG. 876
Extra Heavy Iron Body Bronze Mounted Double Disc Gate—250 lb. WSP.

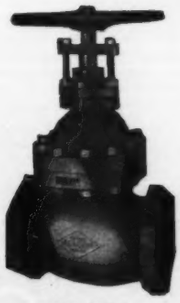

FIG. 203-A
Extra Heavy Iron Body Bronze Mounted Solid Wedge Gate—250 lb. WSP.

FIG. 325
Standard Iron Body Bronze Mounted Solid Wedge Gate—125 lb. WSP.

FIG. 872
Std. Iron Body Bronze Mounted Double Disc Gate—125 lb. WSP.

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Group 3 Gasoline Market Waiting Uneasily for Heralded Buying Movement to Get Started

By T. F. SMILEY

The motor fuel market in the Oklahoma (Group 3) area was waiting uneasily early this week for the heralded buying movement to get started. Owing to the delay in getting the buying under way accumulations of gasoline had been seeking outlet from East Texas, with demand indifferent and prices exhibiting a crumbling tendency. Although Oklahoma refiners were quoting 3¾ cents to the trade for low-octane U. S. Motor and corresponding prices for the other grades, and these figures thus acquired the rather empty rank of being official, East Texas refiners were offering material at prices much below these without creating any disposition among buyers to crowd. There was no scarcity of third grade motor at 2⅞ cents, resale, with indications of willingness in some cases to let it go at 2¾ cents. It was almost as easy to get 400 endpoint at the same price.

Legality of Crude Dubious

The less said about the legality of the crude from which all this material was made the better, notwithstanding the fact that not less than 92 per cent of the East Texas refiners (on the basis of refining capacity) are reported to have signed agreements not to use hot oil in their operations.

Buying by the majors was understood to be held up pending the return from the East of Dr. E. R. Lederer, Fort Worth, Tex., vice president of the Texas Pacific Coal & Oil Co. and head of the Texas buying organization set up under the widened gasoline purchasing plan, which now embraces all territory east of the Rocky Mountains.

Word came out of Tyler, Tex., Tuesday of this week that Louis Green, of New York, a member of the Planning and Coordination Committee, was conferring there with refiners and buyers, with a view of disposing of preliminaries incident to beginning operation of the gasoline purchasing plan, which calls for the removal of all distress material and for successive purchases over a period of time to give the relief needed to stabilize Mid-Continent refinery gasoline prices. The problem of getting the East Texas group to curtail gasoline production remains and upon the success of this is believed to depend the outcome of the buying program.

Although motor fuel consumption has undergone the seasonal falling off attending the close of the vacation season, the shaky condition of the Group 3 market was attributed almost exclusively to the accumulation of surplus stocks in East Texas and the feeling of uncertainty and distrust concerning the new buying program. Jobbers evinced no interest beyond their day-to-day needs. Brokers reported a slight stiffening of prices Tuesday afternoon supposedly as a result of the meeting in Tyler, which was taken to indicate that the buying program would soon be in actual operation.

There was speculation as to the prices which would be fixed in the new contracts to be used under the extended buying plan. Here and there forecasts were heard that the awaited buying movement would usher in 5-cent gasoline.

Buying of Naturals Lacks Energy

The natural gasoline market was in much the same anemic condition as the straightrun. Refinery purchases lacked energy because of the general inclination to wait and see what effect the looked-for buying program would have on prices. It was regarded by natural gasoline manufacturers as probable that high prices for motor fuel, if they should eventuate, would create a disposition on the part of many refiners to buy volatility instead of operating their own recovery plants. This, it was said, might go far to neutralize certain adverse effects which natural gasoline men have believed the enlarged gasoline buying program might have on their business.

A hint of bullishness was imparted to the natural gasoline market Friday and Saturday of last week by a little flurry in North Texas, where the 26-70 grade, which had been selling to the trade at a low of 2⅝ cents, went up a quarter of a cent. The higher quotations failed to hold, however, and this week saw a return to the previous prices.

Burning Oils Strong

Burning oils increased their strength still further in the last week and there was a general upward revision of prices. Buyers on the East Coast are reported to have cleaned up stocks of low coldtest distillates and gas oils in East Texas by purchases during the last month or so, with the result that scarcity now prevails. There was a dull market for fuel oil and heavy gas oils from the East Texas area. Kerosene prices were unchanged, but the market was described as "sloppy."

Movement of neutrals was reported as satisfactory. The demand for bright stocks and cylinder stocks, though slowing down a little under seasonal influences, was fair.

Wax was decidedly stronger. Inquiries were plentiful. Some refiners were said to have turned down orders at 3¼ cents, the ruling price. Higher quotations seemed an early prospect.

Refined Oil Market Barometer

Few definite trends were observable in petroleum products, and for the most part last week's prices were unchanged. Delay in getting the new gasoline-buying program into motion created market unsteadiness in some areas. Advent of cooler weather has stimulated the demand for burning oils and some refiners are reported sold out. Introduction by the Standard of Indiana of a gasoline to sell lower than ordinary third grades has stirred speculation as to whether other refiners will follow suit.

Mid-Continent—Motor fuels unsettled pending actual operation of new purchasing plan. Naturals weaker. Wax stronger.

East Coast—Gasoline export market firmer, but domestic unsettled. Hopeful that buying program will improve conditions.

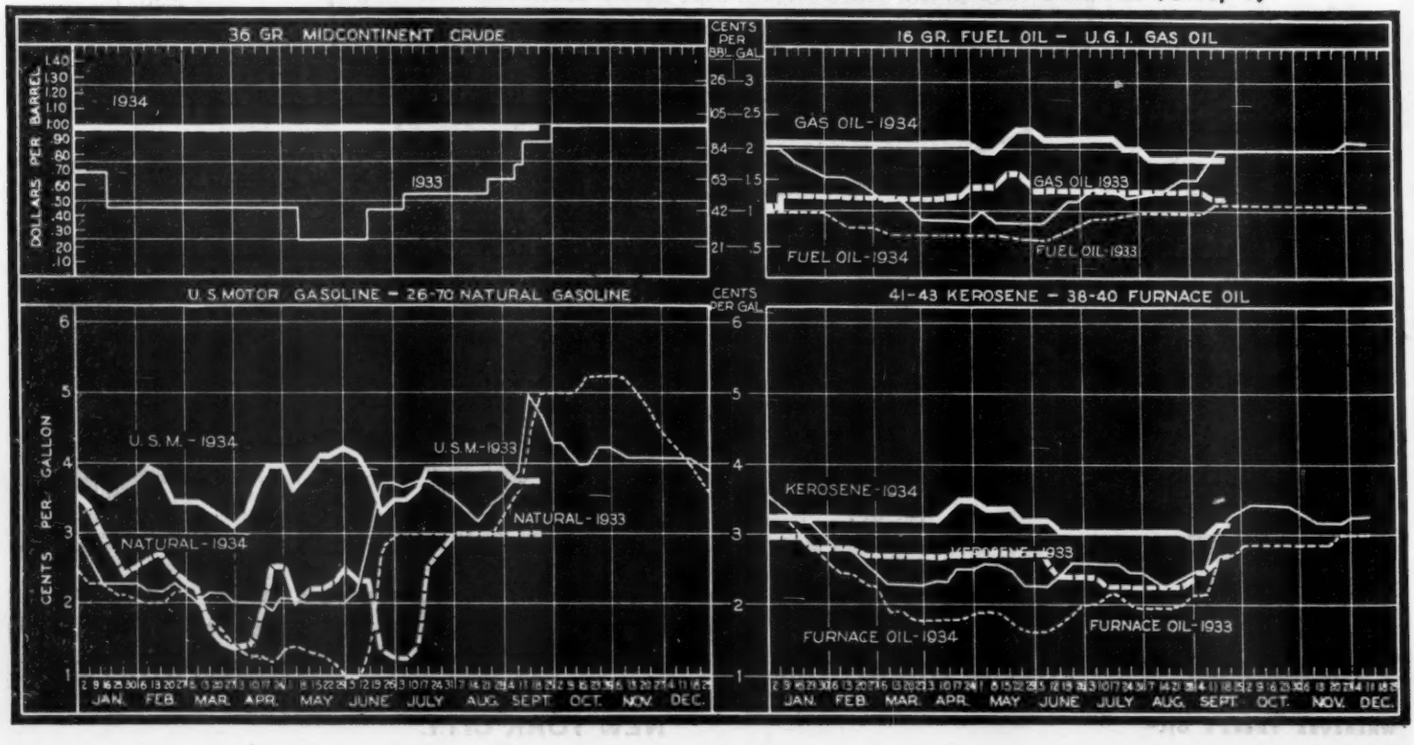
Gulf Coast—Refinery market unsettled owing to hot-oil operations in East Texas. East Texas fuels available at bargain prices.

Pennsylvania—Colorless market in all divisions, with no price changes.

California—Gasoline demand holding up well and favored by warm weather. No price changes.

Chicago—Gasoline still easy and irregular. Heating oils firm. Fuels quiet.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Gasoline Export Market Continues to Improve; Eastern Domestic Cutting of Prices Spreads

By C O. WILLSON

New York Bureau, The Oil and Gas Journal

NEW YORK, Sept. 17.—The gasoline export market continued to give indications of improvement in the fact of an unsettled domestic situation in eastern refinery markets over the past week. In the export end reports indicated that European sellers were maintaining or increasing the advances announced earlier in the month and this development has brought more inquiries into this market for gasoline to be delivered over the balance of the year. So far as known little actual new business has been placed but those in touch with this market believe this will materialize in limited volume before the end of the month.

The latter part of last week Rumanian refiners who are the principal European factors at this time were quoting 5.25 cents per gallon for light gasoline basis the Gulf Coast and 4.30 cents for heavy gasoline for October delivery. The former gasoline approximates the 64-66 375 endpoint grade and the heavier has most of the specifications of the U. S. Motor grade in this country. These quotations take into consideration the current rates of exchange. The quotation on the light gasoline is above the price quoted by most sellers here which ranges from 4¾ to 5 cents for the 64-66 375 grade.

This comparison in regard to prices indicates that some of the pending business will be placed with sellers in this country. Some of the inquiries are for delivery late in the year showing that European buyers are interested in the speculative possibilities of orders placed at this time. Due to the uncertainty that exists in regard to developments in the oil industry over the remainder of the year most sellers have indicated they would not be interested in this business except at quotations higher than those in effect at this time.

Scattered Retail Reductions

In the domestic end the larger refiners have not changed their postings at refineries and water terminals for the several grades of gasoline in tank car and small barges. However, at many consuming points they are meeting competition and protecting jobber accounts where price war conditions exist. The number of subnormal points in tank wagon and service station schedules in this territory is increasing steadily. Among the reductions reported over the past few days were: Portland, Me., 3.2 cents; Albany, 1 cent; Manchester, N. H., and Burlington, Vt., 1 cent. These are key points in the territories in which they are located. Prices are below normal in many smaller cities and towns of the coastal states extending from Maine to the Carolinas.

While various explanations have been offered as to the reasons for these reductions in tank wagon and retail prices they can be summarized by the statement that they all reflect a weak gasoline market. In some cases, small jobbing interests are charged with making initial cuts while in others it is claimed that lower price levels have been brought about by larger operators who have endeavored to increase their volume of business by some less direct form of price concessions.

The fear is expressed that these local cuts will shortly result in a general downward price adjustment throughout the East as was done earlier in the month by the Standard of Indiana in the Middle West.

Reduce Regular Grade

The price cuts in most cases are being made in the regular branded grades of gasoline. Last year and in 1932 it was customary for the larger refiners to use a third grade as a "fighting" grade to meet local reductions often brought about by jobbing interests whose only product was a low octane gasoline. Some of the larger companies this year either dropped the third grade or restricted its distribution to a few points. They also reduced the differential between this grade in sales to dealers and consumers with the end in view of increasing the sales of their regular branded grade.

Up to this time there is no general indication that the larger companies will return to a wider use of the third grade in meeting competition. One sales manager explains that his company has found the third grade an ineffective method of meeting low prices and this company now prefers to lower its regular grade schedules whenever and wherever necessary. The company usually does not lower its quotations to the levels of unbranded grades which do not contain ethyl fluid but by keeping within 1 to 1½ cents of the latter quotations in retail sales, it is able to maintain its usual volume of business when a price war develops. This company cites conditions in both its refining and marketing setup to show that a third grade motor fuel has no proper place in its operations. The company offers a white gasoline of about 60 octane on a tank car basis but this product is not sold through company-owned stations or controlled accounts.

"When a price war develops you are certain to operate at a loss and it makes little difference whether you take it with a regular grade or a third grade," a company executive explains, "and during normal times profit lies in the regular and premium grades with the third grade sold at a loss." This attitude of one refiner is of course not unanimous but it is a viewpoint which appears to be gaining favor among larger distributors in this territory.

Buying Program

Some of the trade feel that the improved export gasoline outlook coupled with the general buying program which has been approved at Washington will bring improvement in the gasoline market so that a general reduction in service station and refinery prices can be avoided in this territory despite the unfavorable developments of the past month. One cargo was purchased last week at a reported price of 5.15 cents basis the Gulf for coastwise delivery. This purchase is said not have been a part of the buying program. The price is slightly higher than recent quotations at the Gulf.

Question Buying Program

As to the possibilities of a general buying program over the next few months there are rather sharp differences of opinion among observers in this territory. Certain investigators including investment houses that make close studies of all developments have given special attention to the East Texas situation where the buying program has largely centered up to this time. One study shows the approximate overall realization per barrel from an East Texas skimming operation (42 gallons to the barrel):

Product—	Gals.	Price per gallon (cents)	Realization (cents)
Gasoline	15	3.25	48.75
Kerosene	5	3 00	15.00
Gas oil and distillate	5	2.25	11.25
Fuel oil	16	1.00	16.00
Total	41		91.00

The prices shown are in line with the going open market for East Texas products at this time. With a 1-gallon loss the total realization on an East Texas skimming operation is 91 cents per barrel. These data could be changed slightly covering either yields or prices to cover individual operations but the total realization would not be changed materially. The point stressed here is that the East Texas skimming plants must have substantially higher prices for their products if they are to confine their operations to legally produced crude oil based on $1 per barrel for the crude at the wells. Transportation from the wells to the plants and the manufacturing cost are low in the field but it would require at least 25 cents per barrel over the crude cost at the well to cover their costs plus a profit to the owners.

Local observers have come to the conclusion that if all hot oil operations are to be eliminated and these small East Texas operations provided for, the price for the gasoline at refineries must be advanced to around 5 cents per gallon. A cracking plant—and there are several refineries in the field with cracking equipment—would have a better operating position but even in these cases the minimum price figured for gasoline is 4¼ to 4½ cents in the field based on $1 per barrel for crude oil at the wells.

With these price situations in mind there are those in close touch with conditions who see further trouble ahead in any program which ties in the elimination of hot oil operations with the guarantee of profit to refiners whose operations in the past have been based on illegal oil. It is contended that these small refineries

(Continued on Page 42)

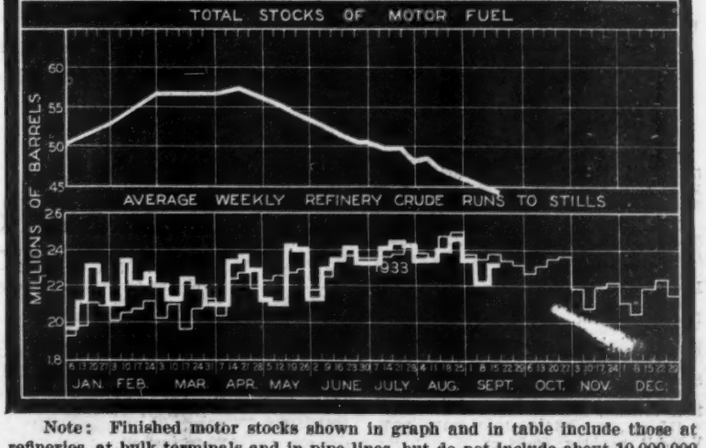
American Petroleum Institute Weekly Refinery Statistics

Week Ending September 15, 1934

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	433,000	13,504,000	14,071,000
Appalachian	93.3	101,000	1,399,000	1,450,000
Indiana, Illinois, Kentucky	94.6	341,000	6,799,000	4,949,000
Oklahoma, Kansas, Missouri	83.7	230,000	4,327,000	3,765,000
Inland Texas	47.6	105,000	1,057,000	1,551,000
Texas Gulf	97.5	524,000	3,520,000	10,794,000
Louisiana Gulf	96.4	92,000	1,444,000	2,627,000
North Louisiana and Arkansas	83.7	48,000	248,000	603,000
Rocky Mountain	66.7	45,000	615,000	579,000
California	96.9	421,000	11,857,000	75,823,000
Total United States	89.7	2,340,000	44,770,000	115,303,000

Week Ending September 8, 1934

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	461,000	13,898,000	13,616,000
Appalachian	93.3	93,000	1,617,000	1,430,000
Indiana, Illinois, Kentucky	94.6	311,000	6,849,000	4,811,000
Oklahoma, Kansas, Missouri	83.7	221,000	4,374,000	3,771,000
Inland Texas	47.6	85,000	1,084,000	1,554,000
Texas Gulf	97.5	491,000	3,352,000	10,509,000
Louisiana Gulf	96.4	93,000	1,520,000	2,458,000
North Louisiana and Arkansas	83.7	45,000	230,000	601,000
Rocky Mountain	66.7	40,000	642,000	589,000
California	96.9	392,000	11,885,000	76,001,000
Total United States	89.7	2,232,000	45,452,000	115,340,000



Note: Finished motor stocks shown in graph and in table include those at refineries, at bulk terminals and in pipe lines, but do not include about 10,000,000 bbls. of unfinished gasoline and stocks of other motor fuels.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils:

Refinery Gasolines

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.04	.03¾	.04
63-70 octane	.04⅞	.05	.04⅞	.05
60-62 400 grades:				
Below 63 octane	.03¾	.04⅛	.03¾	.04⅛
63-70 octane	.04⅛	.04⅞	.04⅛	.04⅝
64-66 375	.04¼	.04⅜	.04¼	.04⅜
68-70 360	.04⅜	.04½	.04⅜	.04½
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03¾	.03⅞	.03¾	.03⅞
63-70 octane	.04½	.04¾	.04½	.04¾
60-62 400	.03¾	.04	.03¾	.04
64-66 375	.04		.04	
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼		.04¼	
63-70 octane	.05		.05	
60-62 400	.04¼	.04⅜	.04¼	.04⅜
68-70 360	.04⅜	.04⅝	.04⅜	.04⅝
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼		.04¼	
63-70 octane	.05		.05	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.03⅞	.03¾	.04
63-70 octane	.04¼	.04¾	.04½	.04¾
60-62 400	.03¾	.04	.03¾	.04
64-66 375	.04	.04¼	.04	.04¼
68-70 360	.04¼	.04⅜	.04¼	.04½
Aviation fighting grade	.05	.05⅛	.05	.05⅛
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.05½	.05¾	.05½	.05¾
60-64.9 octane	.06¼	.06⅜	.06¼	.06⅜
65-70 octane	.06⅜	.06¾	.06⅜	.06¾
68-70 350	.06½	.06⅝	.06½	.06⅝
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¾		.05¾	
Baltimore	.05¾	.06	.05¾	.06
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.06		.06	
Philadelphia	.06	.06¼	.06	.06¼
Boston	.0620	.0650	.0620	.0650
Baltimore	.06	.06¼	.06	0.6¼
Charleston, S. C.	.06	.06¼	.06	.06¼
U. S. Motor, 65 and above:				
*New York (Bayonne)	.06¼		.06¼	
Philadelphia	.06¼	.06½	.06¼	.06½
Boston	.0645	.0675	.0645	.0675
Baltimore	.06¼	.06½	.06¼	.06½
Charleston, S. C.	.06¼	.06½	.06¼	.06½
GULF SHIPMENTS (domestic)—				
U. S. Motor:				
Below 60 octane	.04¾		.04¾	.04¾
60-64.9 octane	.04¾	.05¼	.04¾	.05
65 octane and higher	.05		.05	.05¼

*All grades of gasoline one-fourth cent less for small barge shipments.

Naphthas

	Sept. 18		Sept. 11	
PENNSYLVANIA (inland refineries)—				
50-52 450 (blending)	.05¾	.05½	.05¾	.05½
52-54 450 (blending)	.05⅞	.05½	.05⅞	.05½
54-56 450 (blending)	.05⅞	.05½	.05⅞	.05½
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¾	.04	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
Grade 26-70	.03		.03	
Grade 18-55	.03½		.03½	
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03⅝		.03⅝	
11 lb. v.p. (max.)	.04⅛	.04¼	.04⅛	.04¼
NORTH TEXAS—				
Grade 26-70	.02⅝	.02⅞	.02¾	.03
Grade 18-55	.03⅜	.03½	.03⅜	.03½
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03⅝	.03¾	.03⅝	.03⅝
11 lb. v.p. (max.)	.04	.04¼	.04	.04¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03⅜		.03⅜	
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

Kerosenes

(All kerosenes water white)

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
41-43	.03¼	.03¼	.03¼	.03¼
42-44	.03¼	.03⅜	.03¼	.03⅜
NORTH TEXAS—				
40-41	.02⅞	.03⅛	.02⅞	.03⅛
41-43	.03	.03¼	.03	.03¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04½	.04⅝	.04½	.04⅝
46	.04⅝	.04¾	.04⅝	.04¾
47	.04¾	.04⅞	.04¾	.04⅞
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03	.03¼	.03	.03¼
42-44	.03¼	.03½	.03¼	.03½
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05	.05¼	.05	.05¼
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Sept. 18	Sept. 11
Still run	5.50	5.50
Direct from still	6.50	5.50
Egg, nut, pea	8.25	8.25
Lump	8.25	8.25

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
32-36 straw	.02¾	.02⅞	.02⅝	.02¾
36-38 straw	.02¾	.02⅞	.02⅝	.02¾
38-40 straw	.02¾	.02⅞	.02⅝	.02¾
38-40 prime white	.02⅞	.03	.02¾	.02⅞
NORTH TEXAS—				
38-40 straw	.02¾	.02⅞	.02⅝	.02¾
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.02⅞	.03	.02⅞	.03
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.02¾	.02⅞	.02⅝	.02¾
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02¾	.02⅞	.02¾	.02⅞
38-40 straw	.02¾	.02⅞	.02¾	.02⅞
38-40 prime white	.02⅞	.03	.02⅞	.03
NEW YORK (Bayonne, N. J.)—				
36-40 (No. 1 grade)	.05¼	.05½	.05¼	.05½
32-36 (No. 2 grade)	.04¾	.05	.04¾	.05
21 industrial (No. 4 grade)	.04½	.05	.04½	.05

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
32-36 gas oil cracking stocks	.01⅝	.02	.01⅝	.02
U.G.I. gas oil	.01⅞	.02	.01⅞	.02
32-36, zero to 15 gas oil	.02½	.02¾	.02½	.02¾
28-30, No. 3 burner oil	.95	1.00	.95	1.00
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.75	.80	.75	.80
20-22 fuel oil	.70	.72½	.70	.72½
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.01¾	.02	.01¾	.02
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.57½	.62½	.57½	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02⅝	.02¾	.02½	.02⅝
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02⅝	.02¾	.02½	.02⅝
32-36 gas oil	.02⅝	.02½	.02⅝	.02¾
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01¾	.03	.01⅞	.02
28-30 zero to 10, fuel oil	.95	1.00	.95	1.00
26-28 zero to 10, fuel oil	.85	.90	.85	.90
22-26 zero to 10, fuel oil	.75	.80	.75	.80
18-22 zero to 10, fuel oil	.62½	.65	.62½	.65
Below 18 fuel oil	.55	.60	.55	.60

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03¾	.03⅞	.03¾	.03⅞
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.05	1.20	1.05	1.20
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunker at tidewater)	.82	.85	.82	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.60	.80	.60	.80
San Joaquin Valley:				
10-18 (tank cars)	.60	.70	.60	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.25	1.15	1.25
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.89		.89	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03¾
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.90	.95	1.00	1.05
Bunker C (bunkers)	1.05	1.10	1.15	
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04½	.05	.04½	.05
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
28-30 Diesel (tank cars)	.04¾	.05	.04¾	.05
*Bunker C (to ocean-going ships in N. Y. harbor)	1.30		1.30	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	Sept. 18		Sept. 11	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¾		.11¾	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-30 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07½	.08	.07¾	.08
300-3	.08	.08½	.08¼	.08½
500-3½	.09	.09½	.09¼	.09½
750-3½	.09½	.10	.09¾	.10
1,200-3½	.10	.10½	.10¼	.10½
2,000-4	.10¼	.10¾	.10½	.10¾
Red Oils:				
200-5-6	.07	.07½	.07	.07½
300-5-6	.07½	.08	.07½	.08
500-5-6	.08½	.09	.08½	.09
750	.09	.09½	.09	.09½
1,200-5-6	.09½	.10	.09½	.10
CALIFORNIA—				
Pale Oils:				
100-2½-3	.17½	.20½	.17½	.20½
200-2½-3	.17½	.20½	.17½	.20½
300-3-3½	.17½	.20½	.17½	.20½
350-3-4	.17½	.20½	.17½	.20½
400-3-4	.17½	.20½	.17½	.20½
450-3-4	.17½	.20½	.17½	.20½
550-3-4	.17½	.20½	.17½	.20½
600-3-4	.17½	.20½	.17½	.20½
Red Oils:				
200-4-5	.17½	.20½	.17½	.20½
300-5-6	.17½	.20½	.17½	.20½
350-5-6	.17½	.20½	.17½	.20½
400-5-6	.17½	.20½	.17½	.20½

450-5-6	.17½	.20½	.17½	.20½
500-5-6	.17½	.20½	.17½	.20½
600-5-6½	.17½	.20½	.17½	.20½
700-6½ plus	.17½	.20½	.17½	.20½
750-6½ plus	.17½	.20½	.17½	.20½
900-6½ plus	.17½	2.0½	.17½	.20½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color; 400-405 flash:				
Zero pour test	.23	.23½	.23	.23½
10 pour test	.22	.22½	.22	.22½
15 pour test	.21½	.22	.21½	.22
25 pour test	.21	.21½	.21	.21½
180 vis. at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.29½	.30	.29½	.30
10 pour test	.28½	.29	.28½	.29
15 pour test	.28	.28½	.28	.28½
25 pour test	.27½	.28	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Sept. 18		Sept. 11	
Bright Stocks:				
190-200 D	.20		.20	
150-160 D, 0-10	.17		.17	
150-160 D, 10-25	.16½		.16½	
150-160 25-40	.16		.16	
150-160 E	.16		.16	
Steam refined:				
630 light green (treated)	.13		.13	
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.21½	.22	.21½	.22
15 pour test	.21	.21½	.21	.21½
20 pour test	.20½	.21	.20½	.21
25 pour test	.20	.20½	.20	.20½
Steam refined:				
600	.12½	.13	.12½	.13
650	.15	.15½	.15	.15½
600 Pennsylvania flash	.16	.16½	.16	.16½
630 flash	.20½	.21½	.20½	.21½
600 Warren E filtered	.16	.16½	.16	.16½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Sept. 18		Sept. 11	
124-126 white crude scale	.03¼	.03⅜	.03¼	.03⅜
PENNSYLVANIA—				
122-124	.0300	.0305	.0300	.0305
124-126	.03125	.0325	.03125	.0325
NEW YORK HARBOR—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
128-130	.0480	.0495	.0480	.0495
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.0275	.0300	.0275	.0300
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅛	.03	.02⅛	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Sept. 18	Sept. 11
U. S. Motor	.04¼	.04¼
60-62 400	.04⅜	.04⅜
61-63 390	.04½	.04½
64-66 375	.04⅝	.04⅝
LOS ANGELES, CALIF.—		
U. S. Motor grades:		
53-55 octane	.04 .04¼	.04 .04¼
55-65 octane	.04¼ .04½	.04¼ .04½
65-67 octane	.04½ .04¾	.04½ .04¾
67-69 octane	.04¾ .05	.04¾ .05
Above 69 octane	.05 .05¼	.05 .05¼
58-60 400 endpoint	.04¾ .05½	.04¾ .05½
KEROSENE		
GULF COAST—		
41-43 prime white	.04 .04⅛	.04 .04⅛
41-43 water white	.04⅛ .04¼	.04⅛ .04¼
44 water white	.04¼ .04⅜	.04¼ .04⅜
LOS ANGELES, CALIF.—		
41-43 water white	.04¼ .04¾	.04¼ .04¾
LUBRICANTS		
NEW YORK (f.a.s. in bbls.)—		
Cylinder Stocks:		
600 Warren E	.22 .22½	.22 .22½
600 S.R. unfiltered	.18½ .19	.18½ .19
650 S.R. unfiltered	.21 .21½	.21 .21½
600 flash S.R.	.22¼ .22½	.22¼ .22½
630 flash S.R.	.25½ .26	.25½ .26
Bright Stocks:		
8 color	.27 .27½	.27 .27½
6½ plus color, in dilution	.26 .26½	.26 .26½
NEUTRAL OILS		
200-3 color	.34 .34½	.34 .34½
150-3 color	.27 .27½	.27 .27½
PARAFFIN WAX (Fully Refined)		
NEW YORK (prices per pound)—		
120-122 a.m.p.	.0405 .0425	.0405 .0425
123-125 a.m.p.	.0435 .0455	.0435 .0455
125-127 a.m.p.	.0440 .0465	.0440 .0465
128-130 a.m.p.	.04¾ .0490	.04¾ .0490
130-132 a.m.p.	.0495 .0505	.0495 .0505
133-135 a.m.p.	.0540 .0565	.0540 .0565
135-137 a.m.p.	.0565 .0590	.0565 .0590

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas, and Louisiana	9 Gulf Coast, Texas, and Louisiana	10 Cotton Valley, Louisiana
Below 16	....	....	....	....	....	....	....	$.82	$.82	....
16-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.82	.82	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.06	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.08	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.89	$.89	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.93	1.13	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.13	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.13	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.13	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.13	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.13	1.14	1.02

Note—Effective June 1, 1934, Texas Co. purchases Texas Panhandle crude on a sweet crude and sour crude basis. Panhandle sweet crude is paid for on a basis of the Gray County prices posted above, and Panhandle sour crude is paid for on a basis of Carson and Hutchinson County prices posted above.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.06; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phillex Oil Co., which begins with below 31° at 88 cents.

Column 1.—Effective September 29, Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; Oct. 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2.—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Peel, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3.—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25° 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phillex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phillex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6.—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co. and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7.—Effective September 29, by Stanolind Oil & Gas Co.

Column 8.—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 20-20.9°, 84 cents with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; Below 20°, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20° 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9.—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30).

Column 10.—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 34)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.00
Stratman, Kans. (Sept. 29, 1933)	1.03
Corsicana (heavy) (June 17, 1933)*	.80
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co. and Empire Oil & Refining Co.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933)	$.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29 1933)	.75
Pecos County, Yates shallow pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties*	See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers.

	(See gravity table)
Tomball (see note)*	$1.15
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11,1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2, by Magnolia Petroleum Co., and November 10, by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County), posted by Magnolia Petroleum Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.87
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co.

(Continued on Page 34)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

September 18, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 3 cents a gallon off retail prices, is permitted for purchases running between 8,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo...	18.0	20.0	5.0	10.0
Pueblo	18.0	20.0	5.0	13.0
Grand Junction	20.5	22.5	5 0	15.0
Casper, Wyo. ..	18.0	20.0	5.0	11 5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont. ..	21.0	23.0	5.0	17.5
Billings	22.5	24 5	6.0	16.5
Helena	23 0	25.0	6.0	17.5
Great Falls ...	21.5	23.5	6.0	17.5
Salt Lake, Utah	16.0	18.0	5.0	16.0
Boise, Idaho ..	22.5	24.5	6 0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.0	20.0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.8	16.8	4.0	8.0
Decatur, Ill. ..	14.7	16.7	4.0	10.2
E. St. Louis ...	14.4	16.4	4.0	9.5
Joliet	14.8	16.8	4.0	10.2
Peoria	14.7	16.7	4.0	10.2
Quincy	16.6	17.1	4.0	10.0
Davenport, Ia..	14.5	16.5	4.0	10.1
Des Moines ...	14.4	16.4	4.0	10.1
Mason City	14.7	16.7	4.0	10.1
Sioux City	14.6	16.6	4.0	9.7
Duluth, Minn. ..	15.3	17.3	4.0	10.4
Mankato	15.0	17.0	4.0	9.5
Minneapolis	14.9	16.9	4.0	10.4
LaCrosse, Wis..	16.0	18.0	4.0	10.8
Green Bay	16.2	18.2	5.0	10.2
Milwaukee	12.5	14.4	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich .	16.0	18.0	4.0	10.5
Grand Rapids .	15.7	17.7	4.0	10.2
Saginaw	16.0	18.0	4.0	10.5
Evansville, Ind.	16.3	18.3	5.0	10.0
Indianapolis, ..	16.4	18.4	5.0	10.2
South Bend ...	16.7	18.7	5.0	9.0
Fargo, N. Dak.	16.0	18.0	4.0	11.4
Huron, S. Dak.	18.8	20.8	5.0	11.4
Sioux Falls ...	15.9	17.9	5.0	10.9
Kans. C., Mo.*.	13.9	15.9	4.0	7.5
Springfield ...	13.6	15.6	3.5	8.8
St. Louis	13 7	15.7	3.5	8.7
St. Joseph* ...	13.9	15.9	4.0	7.8
Wichita, Kans..	13.5	15.5	4.0	7.5
Bartlesville, Ok.	16.0	18.5	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolex Furnace Oil in Chicago

Effective Sept. 6, 1934, f.o.b. Chicago tank wagon prices: No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7¼ cents; 150 gallons or more, 6¾ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7⅛ cents; No. 3 (22-26, zero), less than 150 gallons, 7 cents; No. 4 (12-16, zero), less than 400 gallons, 6⅛ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16.9
V.M.&P. naphtha	18.0
Cleaners' naphtha	18 0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent Federal tax.

Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga. ..	19.0	22.0	7.0	14.5
Augusta	20.0	22 0	7.0	14.5
Macon	20.0	22.0	7.0	14 5
Savannah	19.0	21.0	7.0	14 0
Birm'ham, Ala..	18.0	20.0	8.0	11.0
Mobile	20.5	22.5	8.0	12 0
Montgomery ..	21.5	23 5	8.0	15.0
Jackson, Miss. .	18 5	20.5	7.0	13.0
Vicksburg	18.0	20.0	7.0	17.0
Jack'ville, Fla..	18 0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	17.0	19.0	8 0	13.5
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky..	18.5	20 5	6.0	11.5
Covington	16 0	17.0	6.0	11.5
Louisville	18.0	20.0	6.0	11.0
Paducah	14.0	16.0	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex. ...	14.0	16 0	5.0	8.0
Fort Worth ...	14.0	16.0	5 0	8.0
Houston	15.0	17.0	5.0	8.5
San Antonio ..	14.5	16 5	5.0	8.5
El Paso	18 5	20.5	5.0	11.0
Muskogee, Ok..	16.0	18.0	5.0	7 5
Okla. City	12.0	14.0	5.0	8.5
Tulsa	16.0	18.0	5.0	8.5
Ft. Smith, Ark.	16.5	18.5	5 0	8.0
Little Rock	19.0	21.0	7.5	9.0
Texarkana	17.0	19.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	19.0	18.5	4.0	10.0
Newark	18.3	17 8	4.0	9.5
Annapolis, Md..	19.6	19.1	5.0	10 0
Baltimore	19.1	18.6	5.0	9.5
Cumberland ...	20.6	20.1	5.0	12 7
Wash'g'n, D. C.	17.3	16 8	3.0	11.5
Danville, Va. ..	21 7	21.2	6.0	12.9
Norfolk	20.2	19.7	6.0	11.3
Petersburg	20.5	20.0	6.0	11.4
Richmond	20.5	20.0	6.0	11 7
Roanoke	21.8	21.3	6.0	12.9
Charls'n, W. Va.	20 0	19.5	5.0	12.6
Parkersburg	19.3	18 8	5.0	11.2
Wheeling	20.0	19 0	5.0	12.2
Charlotte, N. C.	23.4	22.9	7.0	13.5
Hickory	23.7	23.2	7.0	13.7
Mt. Airy	23 7	21.2	7.0	13 8
Raleigh	23.2	22.7	7.0	13.3
Salisbury	23.5	21.0	7.0	13.6
Charleston, S.C.	21.2	20.7	7.0	11.3
Columbia	23 0	22.0	7.0	13 2
Spartanburg ..	23.4	22.5	7.0	13.5

Price basis to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	17.0	17.4	5.0	10.0
McCook	17.7	18.7	5.0	10.7
Norfolk	17.4	17.9	6 0	10.4
North Platte ..	17.8	18.3	5.0	10 8
Scottsbluff	18.3	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents. Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents. Reliance (third brand) 2½ cents under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	20.8	20.0	*7.0	†12.0
Baton Rouge ..	20.2	19.7	6 0	†12.0
Alexandria	21.1	20 5	*7 0	†10.0
Lafayette	21.3	20.8	*7.0	†12.0
Lake Charles ..	21.2	20.7	*7.0	†12.0
Shreveport	19.0	18.5	6 0	†12.0
Knoxville, Tenn.	24.7	22.5	8.0	13 5
Memphis	23.1	22.5	8.0	10.5
Chattanooga ..	24.5	22.5	8.0	11.0
Nashville	24.0	22.5	8.0	12.0
Bristol	24.5	22.5	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Price bases to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank wagon†	Posted retail	Incl'ds tax of	tank wagon
San Francisco .	16.5	18.5	4.0	12.5
Los Angeles ..	15.5	17.5	4.0	12.5
Fresno, Calif. ..	17.0	19 0	4.0	14.0
Phoenix, Ariz..	20.0	22.0	6 0	‡16 0
Reno, Nev.	19.0	21.0	5.0	15.5
Portland, Ore. .	19.0	21.0	6.0	13.5
Seattle, Wash..	19.0	21.0	6.0	13 5
Tacoma	19 0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Philadelphia, Pa.	15.5	17.5	4.0	10.0
Pittsburgh	16.0	18.0	4.0	10 0
Allentown	15.5	17.5	4.0	10 0
Erie	16 0	18.0	4.0	9.0
Scranton	16.0	18.0	4.0	10.0
Altoona	16.0	18 0	4.0	10.0
Dover, Del.	16 0	18.0	4.0	10.0
Wilmington	15 5	17.5	4.0	9.0
Springf'd, Mass.	15.0	17.0	4.0	8.75
Worcester	15.0	17.0	4.0	9.0
Hartford, Conn.	15.0	17.0	3.0	8 5
New Haven	14.0	16 0	3.0	8.5
Providence, R.I.	12.0	14.0	3.0	8.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y. .	15.0	16.0	4.0	9.0
Met. New York	16.5	17.5	4.0	8.5
Buffalo	17.5	18.5	4.0	9 0
Rochester	17.0	18.0	4.0	9.25
Syracuse	17 0	18.0	4.0	9.25
Boston, Mass...	15.0	16.0	4.0	8.5
Portland, Me. ..	15.0	16.0	5.0	8.75
Manch't'r, N.H.	17.5	18.5	5.0	9.0
Burlington, Vt.	19.0	20.0	5.0	9.75

Commercial consumers allowed 2 cents discount below service station prices in accordance with CD-1 of oil industry's code.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points ...	16.0	18.0	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Hamilton, Ont..	†21.0	23.5	6.0	17.5
Toronto, Ont...	†21 0	23.5	6.0	17.5
Brandon, Man..	30.3	33.3	7.0	21.3
Winnipeg, Man.	28.7	31.7	7.0	20.1
Regina, Sask...	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.8	34.8	6.0	24.1
Edmonton, Alta.	31 2	34.2	6.0	23.7
Calgary, Alta..	28.5	31.5	6.0	21.0
Vancouver, B.C.	†28.0	31.0	7.0	24.0
Montreal, Que..	24.0	27.0	6.0	17.0
St. John, N.B..	26.0	30.0	8.0	21.0
Halifax, N.S. ..	26.0	30.0	8.0	21.0

Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all deals 4 cents off service station price. All other provinces open dealers 2.5 cents off service station price and 1 cent additional to 100 per cent accounts.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Standard Oil Co. (Indiana), September 11, reduced tank wagon and station gasoline 1.3 cents in Decatur; reduced tank wagon gasoline 1.6 cents and advanced station gasoline 1.9 cents in East St. Louis; advanced tank wagon and station gasoline .6 cent in Joliet; advanced station gasoline 2.8 cents in Peoria; reduced tank wagon gasoline 2.1 cents and station gasoline .6 cent in Davenport; advanced tank wagon gasoline .4 cent and reduced station gasoline .7 cent in Des Moines; reduced tank wagon gasoline 1.9 cents and station gasoline .4 cent in Mason City; advanced tank wagon gasoline 1.7 cents and station gasoline 3.7 cents in Sioux City; reduced tank wagon and station gasoline 1.9 cents in Duluth; reduced tank wagon gasoline 1.8 cents and advanced station gasoline .2 cent in Mankato; reduced tank wagon and station gasoline 1.7 cents in LaCrosse; reduced tank wagon and station gasoline 1.5 cents in Green Bay; reduced tank wagon gasoline 3.6 cents and station gasoline 4.7 cents in Milwaukee; reduced tank wagon and station gasoline 1.4 cents in Madison; reduced tank wagon gasoline 1 cent in Grand Rapids and Saginaw; reduced tank wagon and station gasoline 1.4 cents in Evansville; reduced tank wagon gasoline 1.5 cents and station gasoline 1 cent in Indianapolis; reduced tank wagon and station gasoline 1.5 cents in South Bend; reduced tank wagon and station gasoline 1.9 cents in Fargo; reduced tank wagon and station gasoline 2.5 cents in Sioux Falls; reduced tank wagon gasoline 1.1 cents and advanced station gasoline .9 cent in Kansas City; reduced tank wagon and station gasoline 1.5 cents in Springfield; reduced tank wagon and station gasoline 1.3 cents in St. Louis; advanced tank wagon gasoline 2.5 cents and station gasoline 3.5 cents in St. Joseph; reduced tank wagon and station gasoline 1.1 cents in Wichita. August 14, reduced tank wagon kerosene 1.5 cents in South Bend. August 22, reduced tank wagon kerosene 2.7 cents in Wichita. August 25, reduced kerosene .7 cent in Milwaukee. August 28, reduced tank wagon kerosene .7 cent in Fargo; reduced tank wagon kerosene 1.7 cents in Kansas City. September 1, reduced tank wagon kerosene .3 cent in Springfield. September 4, reduced tank wagon kerosene 2 cents in Bartlesville.

Standard Oil Co. of New Jersey, August 31, advanced station gasoline 4 cents in Salisbury.

Atlantic Refining Co., September 8, advanced tank wagon and station gasoline 3.5 cents in Wilmington. September 12, reduced tank wagon and station gasoline one-half cent in Springfield. September 8, reduced tank wagon and station gasoline one-half cent in Worcester.

Standard Oil Co. of New York, September 8, reduced tank wagon and station gasoline 1 cent in Albany. September 11, reduced tank wagon and station gasoline 3.2 cents in Portland. September 8, reduced tank wagon and station gasoline .8

(Continued on Page 32)

NEWS FOR SALES DEPARTMENTS

Readjust Rates on Crude Going to Canadian Plants

OTTAWA, Canada, Sept. 15.—The Board of Railway Commissioners has readjusted freight rates on crude oil imported from various United States fields to refineries in the Canadian West. The order was issued on the application of Lars H. Olsen of Edmonton for the Hi-Way refinery, for an equalization of rates in Calgary and Edmonton.

Maximum rates were established which involved increases for Winnipeg, Weyburn, Regina, Moose Jaw and Calgary and reductions for Swift Current, Yorkton, Saskatoon, Humboldt, Rosetown, Prince Albert and Edmonton. The rates apply from Kansas, Louisiana, Missouri, Oklahoma and Texas on carloads.

Under the new ruling the maximum freight rate on Oklahoma crude going to Calgary, per 100 pounds, is increased from 57½ cents to 72 cents; and the rate to Edmonton is reduced from 96½ to 73½ cents. The proviso is made, however, that carriers may put in a still lower rate if conditions warrant.

The board states that the United States lines take the position that the issue is local to Canada, and the decision therefore was based on the Canadian proportion of the through rate set at 40 per cent.

It was pointed out that two columns of rates had been in effect based on specific gravity, the first column charging 68 cents to Calgary and 70½ cents to Edmonton and the second column 94½ and 97½ cents, respectively. The first column rates, however, it was claimed, discriminated against the small refiner, being only "paper" rates so far as he was concerned since they were not available to him.

"For the present we are issuing no order," rules the board. "Having expressed our conclusions, effect should be promptly given to them without the necessity therefor, although if the necessary action is not taken to make through rates effective in accordance with our findings within a reasonable time, the question of the issuance of an appropriate order will be dealt with."

The board set similar new rates for other western points as follows:

	New rate	Old rate
Weyburn	.49½	47½
Regina	.52	.47½
Moose Jaw	.54	.47½
Swift Current	.58½	.57½
Yorkton	.57½	.79½
Saskatoon	.59½	.82½
Humboldt	.61	.80½
Rosetown	.61	.83½
Prince Albert	.63½	.89½
Winnipeg	.49½	.47½
Calgary	.72	.57½
Edmonton	.73½	.96½

The new schedule will not affect United States rates as shippers are willing to accept their same through proportion.

ADVERTISING RULE MODIFIED

A modification of the provisions of the oil code affecting advertising specialties was announced today by Secretary of the Interior Harold L. Ickes, oil administrator. Under the modification, advertising specialties may be given away provided they:

1. Bear the name of the giver.
2. Are not given on the condition that petroleum products be purchased.
3. Are not distributed at retail stations.

The order as approved by Administrator Ickes modifies an order of May 21, 1934, which stipulated that articles given away should not cost more than 2 cents each. This cost limitation was removed.

Two Dallas Service Station Systems Change Ownership

The Petroleum Products Co. of Dallas, a company formed to market Shell Petroleum Corp. products in Dallas, has sold its 13 retail marketing stations in that city to the Cities Service Oil Co. A station in Grand Prairie, one in Irving and one in Ennis, have also been included in the sale.

The Sinclair Refining Co., which has division offices in Fort Worth, has purchased the retail outlets of the Simms Oil Co. in Dallas. The latter company has some 20 stations in that city, and a 4,000-bbl. refinery. The refinery having been shut down for the past few months, started crude runs to the stills in August, running two weeks. It is now operating only its cracking stills. The company did not contract to stay out of the marketing business in the area and may re-enter the business at a later date when the industry becomes more stabilized.

SEALED LUBRICANTS

MONTREAL, Quebec, Sept. 15.—Announcement has been made that McColl-Frontenac Oil Co., with refineries at Montreal and Toronto and extensive distribution throughout eastern Canada, that in future its lubricating oils will be distributed in sealed cans.

NEW FUEL SELLS AT LESS THAN USUAL THIRD GRADE

The oil trade is much interested in a new gasoline brought out for Metropolitan Chicago by the Standard Oil Co. (Indiana) at one-half cent below the posted price for ordinary third-grade gasoline. The product, unleaded and water white, is understood to be for the commercial trade only and it is believed probable will not be offered outside Chicago, at least for the present. The tank wagon price of the new product, exclusive of tax, is 9.3 cents.

JULY PETROLEUM IMPORTS

The following statistics of imports of petroleum and its products for the month of July are furnished by the U. S. Department of Commerce:

Imports—	Bbls.
Petroleum, crude	2,374,069
Fuel oil	491,988
Unfinished distillates	53,248
Gas oil	893
Paraffin oil	
Liquid derivatives	62
Gasoline	80
Finished light products	
Naphtha	
Illuminating oil	435
Lubricating oils	469
Paraffin (pounds)	1,093,317

W. P Durkee, Jr. » » »

THE task of William P. Durkee, Jr., vice president of the Shell-Union Oil Corporation over the past year has been to correlate and direct the expansion of the Shell marketing operations in the United States. Mr. Durkee came to the New York offices a year ago when the Shell-Union in addition to being the holding unit of the Shell interests in this country also began to direct the operations of the main subsidiary companies through the executive departments established at the general offices in New York City.

The principal subsidiaries of the Shell-Union are the Shell Oil Company of California in the western states, Shell Petroleum Corporation in the Middle West and Southwest, and the Shell Eastern Petroleum Products, Inc., in the East. These companies are major marketers of petroleum products in the states in which they operate. These operations are gradually being expanded in those remaining areas which will give the Shell companies national distribution in the United States. To secure the maximum benefit of this nationwide distribution the parent company under Mr. Durkee's direction has standardized the services, trade-names and other phases of operations in so far as possible.

Mr. Durkee entered the oil business at the close of the World War in the refining branch. Previously he had attended Dartmouth College and served in the navy during the war. After securing wide experience in all branches of the oil business in California and Wyoming, in 1929 with W. C. Van Fleet he organized Van Fleet-Durkee, Inc., which operates all the Shell stations of the Shell Oil Company of California in the West Coast states. When this company was absorbed by the Shell company he became manager of the southern division in 1932. He was elected to his present position in August of last year.

North American Gasoline Tax Conference Meets

ATLANTIC CITY, N. J., Sept. 15.—Official representatives of 35 states and the province of Quebec meeting here this week in the ninth annual convention of the North American Gasoline Tax Conference agreed to standardize accounting systems and to exchange information promptly covering interstate shipments for the purpose of stopping gasoline tax evasion. Representatives agreed that to stop evasion it was necessary that they co-operate in every way possible to check the movement of gasoline from the time it leaves the refineries until it has been delivered in the tanks of the consumers.

Joseph L. McLaughlin of Trenton, N. J., director of motor fuel tax collections in that state, has been elected president of the conference for the coming year.

Oil companies are particularly interested in this development because gasoline tax evasion on the part of a few small operators has tended to demoralize markets in certain sections. The gasoline bootlegger is generally a price cutter and due to this fact prices often are established below the cost of production for those who pay all the taxes levied by the Federal and state governments. In this connection it was suggested that in order to do away with wide discrepancies in gasoline prices due to the differences in state gasoline taxes that state laws provide for uniform taxes at border points. The desirability of having uniform taxes throughout the United States was stressed in this connection.

Baird H. Markham, director of the American Petroleum Industries Committee, on Wednesday pledged the co-operation of his organization in combating the tax evasion evil. "Any failures to collect revenues in full are costly to government and disastrous to industry," said Mr. Markham. "It is my sincere hope you will not only welcome, but actually use, the resources of our national and state organizations, and of such county and municipal groups as have been and will be created.

"As motor fuel administrators, you are expected to collect revenue from a sales tax sometimes exceeding 100 per cent, and averaging more than 40 per cent, despite the inadequacy of appropriations, the lack of sufficient personnel, and all too frequently despite hopelessly unenforceable laws," Mr. Markham continued, after explaining that the petroleum industry knows the problems of gasoline tax administrators, and is sympathetic with them. To these difficulties is added another, he said, the age-old tendency of the taxed to evade payment of taxes whenever they draw too heavily upon his pocketbook, or whenever such evasion is profitable.

OIL HEATING INSTITUTE

NEW YORK, Sept. 15.—Preliminary action looking toward the reorganization of the Oil Heating Institute was taken here this week at a meeting of prominent oil burner manufacturers. Nine manufacturers agreed to provide funds for the reorganization which is necessary before it can be determined whether or not an outstanding educational program is feasible for 1935. A meeting will be held in New York, October 9, at which time a temporary board of directors will be elected and further steps taken in bringing about a reorganization of the institute, its membership and its activities.

The Oil Heating Institute, which is affiliated with the American Oil Burner Association, was active for several years in expanding the use of oil for heat.

NEWS FOR PETROLEUM REFINERS

Slight Increase Shown in June Gasoline Consumption

Based on tax collections in 48 states and the District of Columbia, gasoline consumption for June, 1934, increased 17,280,000 gallons over May. This monthly gain of 1.2 per cent lags the normal seasonal increase from May to June. Compared with consumption of a year ago, June, 1934, showed 1,495,747,000 gallons and June, 1933, 1,511,322,000 gallons. While these figures can be considered fairly comparable, tax evasion and state tax exemption laws tend to deduct from their accuracy. California, the second state in consumption, reported a decrease from the May total.

GASOLINE CONSUMPTION

(In gallons)

	May, 1934	June, 1934
Alabama	12,904,000	12,908,000
Arizona	6,275,000	6,401,000
Arkansas	12,056,000	11,640,000
California	118,548,000	116,126,000
Colorado	15,428,000	14,042,000
Connecticut	23,624,000	25,056,000
Delaware	3,772,000	3,966,000
Dist. of Columbia	9,282,000	8,907,000
Florida	18,792,000	17,390,000
Georgia	19,621,000	19,837,000
Idaho	5,603,000	6,176,000
Illinois	92,178,000	92,517,000
Indiana	42,668,000	40,031,000
Iowa	35,835,000	35,677,000
Kansas	33,756,000	41,773,000
Kentucky	15,582,000	16,286,000
Louisiana	15,325,000	14,684,000
Maine	11,164,000	12,416,000
Maryland	18,798,000	19,208,000
Massachusetts	53,457,000	57,758,000
Michigan	73,260,000	69,787,000
Minnesota	38,466,000	38,242,000
Mississippi	10,144,000	10,975,000
Missouri	42,142,000	42,421,000
Montana	7,795,000	8,393,000
Nebraska	18,961,000	20,623,000
Nevada	2,120,000	2,289,000
New Hampshire	6,473,000	7,317,000
New Jersey	68,062,000	63,569,000
New Mexico	4,519,000	5,024,000
New York	144,473,000	149,032,000
North Carolina	23,798,000	21,722,000
North Dakota	5,841,000	5,883,000
Ohio	89,573,000	83,836,000
Oklahoma	24,931,000	29,566,000
Oregon	14,191,000	16,567,000
Pennsylvania	104,316,000	103,936,000
Rhode Island	9,565,000	10,489,000
South Carolina	10,942,000	10,653,000
South Dakota	9,108,000	8,640,000
Tennessee	18,265,000	18,109,000
Texas	74,451,000	79,098,000
Utah	5,383,000	5,920,000
Vermont	4,437,000	5,069,000
Virginia	22,709,000	23,784,000
Washington	19,352,000	22,516,000
West Virginia	12,962,000	13,740,000
Wisconsin	33,521,000	38,612,000
Wyoming	3,624,000	4,095,000
Total	1,479,567,000	1,495,747,000
Daily average	47,696,000	49,858,000
Change from previous year:		
Total decrease		15,575,000
Pct. change in daily average		—1.03

TWO REFINERIES ENLARGE

Plant expansion of two refining companies marks the latest development in the East Texas refining district. Thomas Potter, head of the Utah Refining Co., has contracted for the installation of a 3,500-bbl. pipe still for the company's plant at Kilgore. This will triple the capacity of the existing plant. The unit which is now under construction is expected to be completed in 45 days.

R. J. McMurray and Marvin McMurray, owners of the McMurray Refining Co. at Arp, have practically completed negotiations with G. L. Rowser, president of the Taylor Refining Co., for purchase of the 1,500-bbl. refinery now operating under the latter name at Tyler.

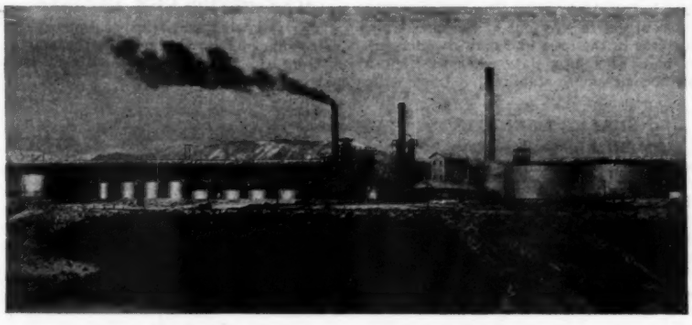
Recently the McMurray Refining Co. purchased the cracking equipment of the Kettle Creek Refining Co. of Eldorado, Kans., but the transportation and installation of the unit which was to have been completed by November 15 has been delayed.

Reopened Wyoming Refinery to Process Low Gravity Oregon Basin Crude Oil

Starting September 20 the Texas Co. will resume operations at its Cody, Wyo., refinery which has been shut down since 1931. The refinery, which has a rated crude oil capacity of 3,000 bbls. daily, was built in 1929 and was shut down in 1931 due to unfavorable marketing conditions.

The refinery operates with the Oregon Basin crude obtained near the refinery. This crude oil is low gravity and substantial cracking is necessary at the refinery to secure a satisfactory yield of gasoline. The refinery equipment includes a 1,500-bbl. Holmes-Manley cracking unit. The products of the plant are gasoline, fuel oil and road oil.

L. F. J. Wilking, who also is superintendent of the Casper, Wyo., refinery of the Texas Co. will be in charge of the Cody refinery. C. J. King, as assistant superintendent, will be in direct charge of the Cody operations. Other refineries of the Texas Co. in the Rocky Mountain region are located at Casper, Wyo., Craig, Colo., and Sunburst, Mont.



General view of the Cody, Wyoming refinery of the Texas Company which resumed operations September 20

Decisions Given on Gasoline Allocation Appeals

The Refinery Board of Review, which met in Washington on the first Wednesday in September for the purpose of hearing and reviewing appeals from refinery gasoline production quotas for the month of September, reported 51 appeals and rendered decisions as shown in the table below. The companies are classified geographically according to the regional changes just released by the Planning and Coordination Committee.

Appellant—	Refinery district No.	September allocation (bbls.)	Increase requested (bbls.)	Result
White Eagle Oil Corp.	4	196,262	28,738	Denied
Waverly Oil Works Co.	2	6,050	750	750
Skelly Oil Co.	4	243,981	72,074	30,000
National Refining Co.	4	91,045	23,955	23,955
Phillips Petroleum Co.	4	214,785	128,215	Denied
Standard Oil Co. (Ohio)	2	230,000	67,000	Denied
Wirt Franklin Petroleum Corp.	4	16,559	5,441	5,441
Kendall Refining Co.	2	43,125	21,326	14,375
Barnsdall Oil Co.	4	172,608	47,392	Denied
Quaker State Oil Refining Corp.	2	93,550	11,450	5,450
Atlantic Refining Co.	1	794,000	218,000	Denied
Atlantic Refining Co.	2	103,000	57,000	Denied
National Refining Co.	3	28,545	11,455	11,455
Bradford Penn Refining Corp.	2	5,450	623	623
Bradford Oil Refining Co.	2	11,800	1,200	600
Elk Refining Co.	2	13,650	4,150	2,850
Phillips Petroleum Co.	5-A	497,218	87,782	Denied
White Star Refining Co.	3	153,494	26,506	Denied
Gulf Refining Co.	3	371,798	78,202	60,000
Continental Oil Co.	4	285,823	79,897	Denied
LaSalle Petroleum Co.	5-A	5,720	1,030	Denied
Sinclair Refining Co.	3	474,852	95,148	70,000
Shell Petroleum Corp.	4	133,997	56,003	10,000
Shell Petroleum Corp.	3	658,915	58,230	Denied
Standard Oil Co. (Ohio)	3	280,302	34,698	Denied
Solarene Refining Co.	5-A	14,998	5,002	2,500
Pettus Refining Co.	5-A	3,520	4,480	770
Gratex Refining & Fuel Oil Co.	5-A	1,780	500	500
Gulf Refining Co.	5-B	763,962	236,038	165,000
Marathon Oil Co.	4	30,164	3,836	3,836
Aero-Gas Refining Co.	5-A	440	400	400
Canyon Oil & Gas Co., Inc.	5-A	616	.....	Denied
Continental Oil Co.	1	109,000	27,000	Denied
Continental Oil Co.	5-A	73,923	18,633	Denied
C. P. Chapa Refining Co.	5-A	440	360	Denied
Republic Oil Refining Co.	5-B	.....	.....	Withdrawn
Pasotex Petroleum Co.	5-A	63,362	19,665	Denied
Texas Gulf Coast Refining Co.	5-B	6,000,000	1,250,000	270,000
Crown Central Petroleum Corp.	5-B	100,000	43,000	Denied
American Petroleum Co.	5-B	60,000	16,500	Denied
Old Dutch Refining Co.	3	13,245	1,755	1,755
Lakeview Oil & Refining Co.	8	5,952	595	Denied
Texas Co.	3	511,227	98,654	78,000
Texas Co.	4	181,804	54,739	30,000
Texas Co.	5-A	233,120	55,785	Denied
Texas Co.	5-B	1,378,836	292,187	165,000
Texas Co.	7	77,111	52,558	Withdrawn
Continental Oil Co.	7	134,587	11,356	Denied
Lubrite Refining Corp.	3	74,693	8,000	8,000
Union Oil Co. of California	8	416,511	65,489	Denied
Yale Oil Corp.	7	16,371	3,129	3,129

Refinery Construction Continues in Michigan

Increased potential and Federal limitations on production have tended to stimulate the construction of a number of small refineries in Michigan this year.

The Central Michigan Oil & Refinery Co., headed by C. E. Buckining, of Alma, is reported to have broken ground for another small refining plant at St. Louis, Mich., with the backing of St. Louis and Alma capital.

Construction of two other small independent plants will be started soon, it is understood. Max Pray, former operator in the southwest, will begin building a refinery to handle upwards of 1,000 bbls. of crude daily at Wyman, Mich., near the Pure Oil Pipe Line Co.'s loading racks for handling crude from the Home Township, Montcalm County, upper Travis Pool.

The Mid-West Refining Co. opened a 1,500-bbl. plant in Alma recently using Porter crude. Incomplete plans for two or three other refinery projects for central Michigan also have been reported but have not yet materialized.

Pure Oil Co. is installing a new Ethyl blending plant in connection with its Midland refinery. Lewis Grimmision, Pure Oil engineer, is in charge of the installation.

Construction of a new 750-bbl. refinery is expected to be completed and ready for operation about October 1 at Elsie, Mich., by the Superior Oil Co., it was announced by company officials. H. J. Smith heads the new company with Robert Guy, formerly of Mount Pleasant, as plant superintendent. E. G. Guy, the latter's father and former superintendent of the Old Dutch Refinery at Muskegon and the Roosevelt Refinery in Mount Pleasant, is superintending construction.

The crude supply will come from the Porter Township, Midland County, Field, the largest oil pool in Michigan.

Geographic Revision Affects Five Refinery Districts

The Planning and Coordination Committee announces a geographic revision of its regional refinery districts approved July 11 and September 11, 1934:

Refinery region No. 1, same as formerly.

Refinery region No. 2, same as formerly.

Refinery region No. 3, take out Iowa and Missouri.

Refinery region No. 4, Oklahoma, Kansas, Missouri and Iowa.

Refinery region No. 5-A, inland Texas (all Texas except Texas Gulf Coast).

Refinery region No. 5-B, Texas Gulf Coast.

Refinery region No. 5, add New Mexico (approved September 11).

Refinery region No. 6, same as formerly.

The new arrangement, it is felt, better segregates the problems peculiar to refinery marketing in the areas affected by the change. Appointments to the new regional committees were approved by the Planning and Coordination Committee.

TEXAS REFINERY REOPENS

The Waggoner Refining Co. at Electra, which shut down its plant on September 1, has resumed operations but is only running on oil taken from storage at the plant. The company is storing oil for operators who formerly furnished the plant with crude, charging them 5 cents per barrel gathering charges and 1 cent each 15 days it is in storage. The Magnolia Petroleum Co. is taking 2,000 bbls. per day, which quota formerly went to the Waggoner plant, another 2,300 bbls. per day going into storage at the plant.

$11,928 SAVED...

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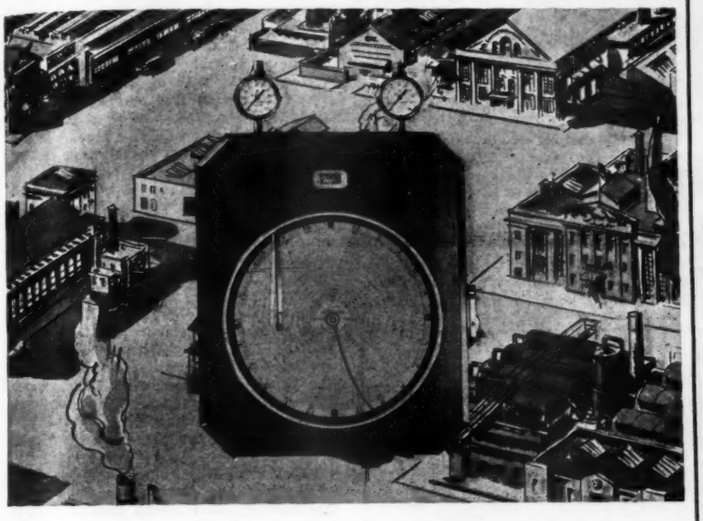
TEMPERATURE CONTROL



Taylor System again proves its value to industry by cutting operating costs, increasing plant efficiency and maintaining product uniformity

SAVINGS to one plant in a year's time are nearly triple the cost of equipment and installation of the control system.

Here are figures that speak louder than theories or any words in favor of *engineered temperature control.*

This particular plant installed a Taylor System of Temperature Control and awaited definite results.

At the end of 48 weeks, the plant had recorded savings of $11,928. And again a Taylor System had much more than paid for itself in a year's time.

Whence came the savings?

In fuel to the extent of $324.00. In raw materials to the amount of $5,220.00. Through increased production to the extent of $6,384.00. Total, $11,928.00. The cost of the System was only about $4,000.00.

Instance after instance of remarkable money savings, increased plant efficiency, and production of more uniformly high quality products has been the experience of Taylor Engineers over a period of many years.

It makes little difference what type of mill you have or what product you make there. If temperature control—pressure or flow control, too, for that matter—is necessary, then a Taylor System of indicating, recording and controlling instruments can be engineered to do the work accurately, efficiently and economically.

A survey will tell

Executives of bakeries, oil refineries, textile mills, canning plants, power plants, paper mills, meat packing plants, breweries, and many others can all testify to the value of exact control by Taylor instruments.

The first step in determining how much Temperature Control can do for you is to ask a Taylor Representative for a survey of your plant. Every Taylor System is a "Taylor-made" system, engineered and installed to fit special needs and conditions. Today is the time to see just what your needs may be. Let us help you meet them and cut your costs, too. For help on any problem involving temperature—also pressure and flow—address Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada.

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Indicating | Recording • Controlling

TEMPERATURE, PRESSURE *and* **FLOW INSTRUMENTS**

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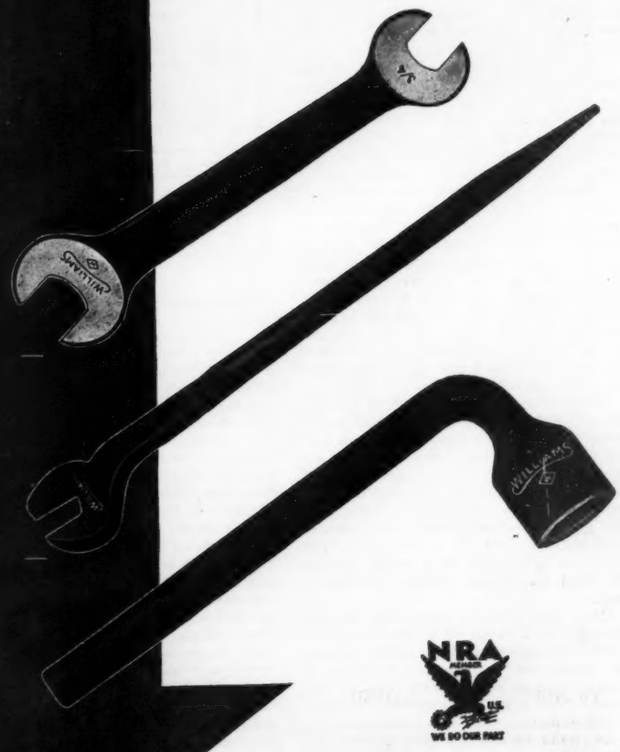
for oil production service need, in addition to good design, an ability to "take it on the chin." That's one quality you'll find in Williams' Drop-forged Wrenches. It starts with the steel. Then they have *toughness* pounded into them under the forging hammers. Finally they are hardened to make them stay that way. If you want *wrench service* ask your distributor for Williams'.



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NATURAL GASOLINE MANUFACTURE

Tests Compare Bottled Gas and Electricity

A salient point in the comparison of bottled gas and electricity for domestic use is "speed," according to "Talking Things Over," a publication of the Phil-gas Co.

"Cooking speed" refers to the rate at which effective heat units actually penetrate and perform a desired "heat treatment" result on a food.

Speed depends on appliance design—not on the inherent heat characteristics of the fuel. The design factors that most control speed are the rate at which heat units are permitted to flow from the heat source and the obstacles that these released heat units have to overcome before they can accomplish the cooking process.

Let us consider the top burners of a bottled gas and electric range. A bottled gas top burner can be designed incorporating a No. 80 orifice, which will permit only 1,301 heat units to flow in one hour. That would result in extremely slow cooking. On the other hand a No. 68 orifice, passing 6,870 heat units per hour will produce a heat flow of 5.3 times the former.

The resulting actual cooking speeds, however, would be an even greater than 5.3 to 1, because all through the heating process the utensil has radiated heat units into the surrounding air. The lower the heat input, the longer the cooking time, and therefore the greater period of wastage of radiating heat units.

Likewise in the electric top unit, arbitrary design factors control the rate of heat flow and consequently the cooking speed. One cannot correctly say that "electricity is slow." It would be more correct to say "because of practical limitations, the electric top design may so restrict the rate of heat flow that resulting cooking speeds are slow compared to those of bottled gas range top burners in comparable ranges."

What are these "practical limitations"? Primarily, they are restrictions dictated by economy requirements in consumption and by the current carrying capacity of the entrance wires and switches. It is evident that the greater the current consuming possibilities of the electric unit, the greater will be the money wasted if any burner is allowed to run "idle" or is applied to a small cooking job when such large capacity is unnecessary.

It is also evident that were all the elements on a range of so large capacity as to give relatively high cooking speeds, the "peak pull" on the line would be of considerable magnitude and require larger and more expensive entrance facilities to carry it.

As to the obstacles which stand in the way of an electric element delivering immediate heating results, the metal itself plays a considerable part. It is evident that a certain number of the first heat units and a period of time are required to overcome the heat absorbing capacity of the unit. Such a delay is negligible in the transfer of heat from a

(Continued on Page 42)

BUILD MICHIGAN PLANT

Plans have been completed for a natural gasoline plant to be built on the Theodore Oil Co.'s lease in the Porter Township, Midland County, Pool of Central Michigan. C. L. Maguire, head of the Roosevelt Refining Co., Dr. Virgil R. F. Kirkham and James C. Graves are working out the details for the new plant to be erected this fall on a co-operative basis by some of the larger independent operators in the Michigan Field.

Deterioration of Absorption Oil in Plant Operation Studied Over Two Years

In the great amount of research and development which has taken place in the natural gasoline industry, the study of absorption oil seems to have escaped the attention of most investigators. A recent survey of the deterioration of absorption oils by W. E. Kuhn and J. F. Collins of the Texas Co. is outstanding not only as one of the first of its kind, but also as a very complete work. The work was reported in a paper read last week before the petroleum section of the American Chemical Society during its annual meeting in Cleveland.

The first step in this investigation was to choose the tests to be used in tracing the age of the oil. Out of several, including the A.S.T.M. tests, five were adopted as yielding accurate results pertaining to the absorptive properties of the oil tested. The gum content test was considered the most important from the standpoint of the usefulness of the oil for absorption. The value of the demulsibility test was also recognized. Demulsibility shows the degree of emulsion taking place in the towers and stills of the plant, and therefore represents a factor of the efficiency of the oil. Distillation with special reference to the endpoint showed the presence of gums in the oil, and was accepted as a test to be used. Gravity, both A.P.I. and specific, and carbon residue were the remaining two tests chosen as being indicative of the condition of the absorption medium. Viscosity, tar and oxidation were discarded because of difficulty in obtaining consistent results, although the properties are considered important in this connection.

For a period of two years tests were made on absorption oils used in a system processing refinery still gases and cracked gases. The gases were passed through water scrubbers and were desulphurized before contacting the oil. Samples of lean and rich oil were taken at regular intervals, and by results of the five chosen tests, the deterioration was traced. Table 1 shows results of one of the surveys.

The report states: "Summarizing the data contained in this table, it will be noticed that there is a rapid increase in the endpoint by distillation (505° to 619° F.), demulsibility (9 to 290 min.), and a gum content (2.8 to 20.8 per cent) together with an increase to lesser extent in the sulphur (0.18 to 0.53 per cent) and carbon residue (0.01 to 0.42 per cent)."

Gum is the best indicator of the age of an absorption oil. It deposits in exchangers decreasing the heat transfer; it cuts down the absorptive properties of the oil, and adds to emulsion troubles.

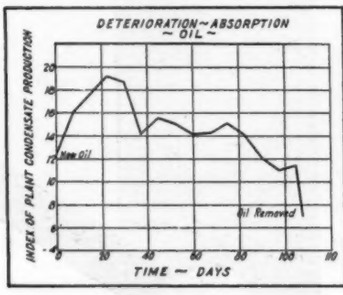

Figure 1
Efficiency curve for unrenewed absorption oil in batch operation

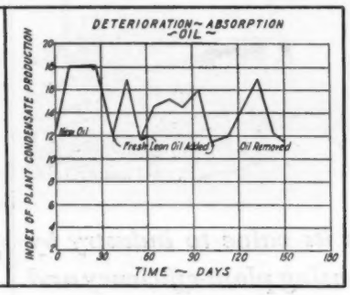

Figure 2
Efficiency curve for absorption oil revived at intervals by new oil

Samples of the gummy substance were taken from exchangers and tanks of the test system, and analyzed. The gum from the tanks contained 95 per cent moisture and volatile matter and small amounts of oil, tar, carbon and ash. The gum collected in coolers contained 70.7 per cent of ash together with oil, and moisture and volatile matter.

Accurate checks were kept on the efficiency of the plants themselves during the survey. For one period the oil was renewed completely and studied without changing. For another period the oil was "revived" at intervals by adding fresh lean absorption medium. Figure 1 shows the case of the batch oil operation. The curve can be seen to drop off as the oil aged, especially after 100 days. Figure 2 shows the effect of adding fresh oil during the period of operation. The efficiency or production of gasoline makes decided gains after each addition although the succeeding drops are just as great.

Kuhn and Collins recommend that plant operators make a study of their

(Continued on Page 42)

TABLE 1—ABSORPTION OIL DETERIORATION

	New oil	Used oil	Used oil	Used oil	Used oil	Used oil	Spent oil
Oil in service, days	.....	17	32	51	71	89	108
Tests:							
Specific gravity	0.8022	0.8081	0.8118	0.8146	0.8170	0.8189	0.8260
Carbon residue, per cent	0.01	0.07	0.09	0.09	0.16	0.25	0.42
Sulphur (Bomb) per cent	0.18	0 28	0.42	0 43	0.45	0.47	0.53
Demulsibility, mins.	9	107	165	181	232	256	290
Gum, per cent (Gill)	2.76	6.63	9.40	10.6	13.5	16.7	20.8
Distillation:							
I.B.P.	344	290	238	378	376	360	324
10 per cent	386	334	387	420	430	436	440
30 per cent	400	360	413	428	440	446	452
30 per cent	411	409	426	436	446	450	458
40 per cent	420	422	432	444	450	454	462
50 per cent	428	433	438	448	456	460	468
60 per cent	436	442	447	454	462	466	471
70 per cent	444	451	456	464	470	470	481
80 per cent	452	462	468	474	480	484	494
90 per cent	468	485	484	490	501	500	518
95 per cent	483	516	523	516	536	534	556
E.P.	505	524	556	578	580	588	619
Recovery	98.0	98.0	98.0	98.0	98.0	98.0	98.0

Effect of Flame Propagation on Performance of Engines

When the spark occurs in the cylinder of an internal combustion engine, it initiates a flame which spreads more or less rapidly to all parts of the combustion chamber, the burning gases remaining luminous for some time after flame propagation is complete, according to the Bureau of Standards.

The performance of the engine is affected by the rate of flame spread and the duration of the period of reaction and heat liberation following inflammation. As the rate of flame spread is further dependent upon the burning characteristics of the fuel, this test offers possibilities in the study of liquefied gases for use in internal combustion engines.

Since an explosion is usually completed in about one-hundredth of a second or less, special apparatus employing windows in the cylinder head and a shutter arrangement for selecting the desired point in the cycle at which the observation is to be made is required to follow visually or photographically the swift spread of the flame-front and to measure the rapid variations in radiation which indicate the duration of the reaction period, it was stated.

Observations conducted with specially designed apparatus at the National Bureau of Standards under the sponsorship of the National Advisory Committee for Aeronautics, have shown that in normal explosions the flame-front starts slowly from the spark plug, increases its speed to a maximum near the middle of its journey, and then slows down as it approaches the combustion chamber wall. The average flame speed for a normal explosion is about 70 feet per second (nearly 50 miles per hour).

Flame speeds are decreased if the carburetor is set too rich or too lean, or if large amounts of residual gas from the previous explosion are mixed with the new charge, as occurs when the throttle is partly closed. In some manner which is imperfectly understood, an increase in engine speed causes an almost proportional increase in flame speed. This is very fortunate for otherwise modern high-speed engines would be impractical.

Flame travel is also affected in a complicated manner by combustion chamber design and the number and location of spark plugs. When "fuel knock" occurs the progressive inflammation of a part of the charge is followed by practically simultaneous inflammation of the last portion to burn, the Standards Bureau states.

ABSORPTION PLANT COMPLETED

CALGARY, Alberta, Sept. 15.—Completion of the $300,000 gasoline absorption plant of Gas & Oil Products, Ltd., in the South Turner Valley Field, has been announced by A. H. Mayland, president of the company. The plant, located on the Mercury lease in Section 4-19-2w5, is processing gas from the East Crest, Hylo, Mercury, Miracle and Mill City wells. It will have an output of about 500 bbls. a day when adjustments are completed. The plant is equipped to produce either naphtha or gasoline of various grades, and will run whichever is found most profitable.

CANADIAN IMPORTS

Imports of casinghead gasoline into Canada in May totaled 6,118,140 gallons appraised at $343,522, against 1,732,252 gallons at $57,221 in April. Receipts of gasoline lighter than .8235 specific gravity were 1,125,337 gallons worth $105,950 in May and 625,465 gallons worth $53,540 in April.

NATURAL GASOLINE BLENDED WITH YOUR MOTOR FUEL WOULD

Prevent A LOT OF THIS THIS WINTER!

NOW *is the time to buy Natural Gasoline!*

Just **NATURAL GASOLINE**

10 Pounds	18 Pounds
12 Pounds	22 Pounds
14 Pounds	26 Pounds

WARREN

Petroleum Company • TULSA, OKLA.

Late Fields

OKLAHOMA

W. A. Delaney and others' No. 1-A Craddock, NW cor. SE NE Section 25-2-6, the fifth deep sand oil producer in the Fitts Pool in Pontotoc County, Oklahoma, came in this week with a production of 1,887 bbls. in six and one-half hours, producing for a part of the time through tubing against an 800-pound back pressure and for the remainder of the period through a 1-inch choke. It looks like an 8,000-bbl. well. Viola lime was topped at 3,910 feet and the hole was bottomed at 4,427 feet. The well was washed in.

In the Langston Pool in eastern Logan County, J. C. Shaffer and others' No. 1, C SW SW SE Section 11-17-1w, found Wilcox sand at 5,104-24 feet. While the bailer was being run the well started flowing and produced 96 bbls. in 24 hours. Tubing will be run. The Texas Co. and others' No. 1, C NE NE NW Section 14-17-1w, flowed 227 bbls. in 24 hours through 2½-inch tubing and later 125 bbls. in 24 hours, pinched in.

Carter Oil Co.'s No. 3 Mosier, C SE SE SW Section 34-26-6, Osage County, made 565 bbls. in 24 hours and later 393 bbls. in 12½ hours from Bartlesville sand topped at 2,808 feet and drilled to 2,848 feet and it was given a shot.

Pipe Line Valuation Survey Is Proposed

(Continued from Page 9)

Article 2 of the code provides that a definition shall be made in various fields and areas by the regional committees subject to revision and approval by the Planning and Coordination Committee.

A definition has been arrived at by the production subcommittee and approved and promulgated by the Planning and Coordination Committee. It provides "The wells in any group of wells, upon a single lease, or group of leases, within a single pool, operated by the same pumper or pumpers, and which do not return in aggregate gross income from the working interest, over a six-month period (said period to begin on April 1 and on October 1 of each year), an amount in excess of 40 cents per day per 100 feet in aggregate depth of the wells in such group, are declared to be 'stripper' wells.

"Any such group of wells, as above described, which do not return from the working interest an average gross income exceeding $4 per day per well during such six-month period, shall be considered as 'stripper' wells regardless of the average depth of such wells;

"Provided, that no well shall be included in any group for the purposes of the above computation unless such well shall have produced oil for at least 120 days during such six-month period."

The operator of any property which does not meet these requirements but who feels that because of peculiarities surrounding his case the wells should be classed as "strippers" may petition the state or regional production committee to reclassify his wells. Such reclassification must be certified to the Planning and Coordination Committee and approved by them.

Employes are given the same right of appeal if they feel that certain properties are wrongly classified and thereby working a hardship on them.

This ruling of the committee is expected to put an end to the uncertainty of the relations between "stripper" well operators and their employes. The regulations in regard to whether or not employes on "stripper" well properties were governed by the maximum hour and minimum wage provisions were rendered vague due to the fact that there was no definition of "stripper" wells.

Pipe Line Decision

Demurrage charges and/or storage charges incident to the transportation of petroleum and petroleum products by pipe line are subject to the tax imposed on the pipe line operator for such transportation, according to a recent decision of the Bureau of Internal Revenue. The bureau held that the demurrage charges incident to the transportation of oil by pipe line are for a service rendered by the pipe line carrier after the actual physical movement of the oil through the carrier's pipe lines has ended. The charge is made for retention of the shipment by the carrier after the shipment reaches its billed destination, and arises out of, and as a result of, the transportation of the commodity.

As a part of its service the pipe line company must maintain storage tanks to render properly the service attributable to pipe lines, as experience proves that the consignee is not always able to remove the oil upon arrival. This storage is an essential part of the service rendered by the carrier and a necessary incident of the process of transportation as a whole, the decision states. The pipe line as a carrier does no business as a warehouseman or storage agent except as indicated. The charge, though not a charge for the actual movement of the oil through the pipe lines, is a handling charge arising out of the transportation before delivery of the commodity is made.

That portion of the revenue act applicable to pipe line transportation reads as follows: "There is hereby imposed upon all transportation of crude petroleum and liquid products thereof by pipe line . . . a tax equivalent to 4 per cent of the amount paid on or after the fifteenth day after the date of the enactment of this act for such transportation, to be paid by the person furnishing such transportation."

The tax is imposed on "all transportation of crude petroleum and liquid products thereof by pipe line," says the decision, and "since the passage of the first Interstate Commerce Act the term 'transportation' as used in this country, so far as carriers are concerned, includes storage and demurrage. In view of this fact, it is reasonable to assume that when Congress imposed a tax on 'all transportation of crude petroleum and liquid products thereof by pipe line' it intended the word to be construed as it is generally construed by the courts in cases involving carriers." It was held that the charges referred to were subject to the tax imposed by this section of the act.

Secretary Ickes, oil administrator, has designated Norman L. Meyers, member of the Petroleum Administrative Board, as the Government's representative on the program committee, which committee has jurisdiction over the purchases of gasoline.

Omission to be Corrected

A public hearing has been called by the Petroleum Administrative Board for Monday, September 24, for the purpose of correcting certain sections of the petroleum code.

In the executive order, issued September 13, 1933, approving the amended code, no specific reference was made to Paragraph 2, Section 4 of Article 3, which reads:

"If any subdivision into quotas of production allocated to any state shall be made with a state any production by any person, as person is defined in Article 1, Section 3, of this code in excess of any such quota assigned to him shall be deemed an unfair trade practice and in violation of this code."

To remove any doubt concerning the applicability of that paragraph of the code, and to comply with the legal provisions necessary for a formal ruling on the subject, it is necessary that a hearing be held.

The position taken by the oil administration, the Planning and Coordination Committee, and other agencies involved, is that the paragraph has always been in force and effect since the inception of the code. The omission was noted in connection with the appeal of the Panama-Amazon case to the Supreme Court.

Second Gasoline Buying Program in the East Texas Field Began Tuesday

By L. E. BREDBERG

FORT WORTH, Tex., Sept. 18.—Men watching the East Texas Field figure that around 75,000 bbls. of oil per day was overproduced during the week, others estimating still higher on runs and shipments. The gasoline market continued to sag but the field has been given a gasoline quota of 425,000 bbls. from surplus storage and current output for September, the gasoline to be purchased at a reported 5 cents per gallon by major units to stabilize the market. All of this gasoline is third grade U. S. motor fuel, the only grade put out by the majority of the plants in the district, only a few of the plants having cracking units. Four cents is to be paid for the excess storage gasoline and 5 cents for the current production, the highest price heard of in this field for a long time, most of it selling all the way from 2¾ to 3⅛ cents per gallon for many months. If too many refiners break faith with the major purchasers, and much over-produced oil continues to be run to the plants and the products sold on the side to brokers below the price paid by the majors, with apparently no means of curbing interstate and intrastate shipments of refined products, there is a possibility of the necessity of a price cut in crude.

L. A. Green in Charge

L. A. Green of Fort Worth has been appointed chief of the field staff to direct the gasoline buying in the field under the direction of the Program Committee of the Planning and Coordination Committee at Washington. He has set up headquarters at Tyler.

Preparing an Appeal

The attorney general's department is preparing an appeal from the decision by Judge E. M. Dodson at Austin overruling the Railroad Commission's tender orders on refined products. In the meantime the State Legislature may amend its old law dealing with shipments of crude oil to include shipments of refined products, or may write an entirely new bill to cover both. Governor Miriam Ferguson submitted to the Legislature Monday a bill to extend the regulatory powers of the commission to refined products.

Tank Car Shipments

During the week there were 2,148 cars of refined products shipped from the field. They are as follows:

Products—	Cars	Gallons
Gasoline	824	6,681,930
Fuel oil	487	4,607,790
Residuum	126	1,130,970
Kerosene	95	765,980
Distillate	238	1,934,590
Topped crude	69	616,295
Casinghead gasoline	110	953,695
Gas oil	193	1,599,440
Crude tops	6	57,780
Total	2,148	

On September 9 there were 181 cars shipped out and on September 11 the number had increased to 433 cars, showing how the refiners are taking advantage of the situation to unload as much gasoline as possible before the commission or Federal Government can bring some action to check them.

Royalty Owners Sue

Two landowners in the Gladewater area have filed suits against a producer alleging he has produced a large quantity of oil on which he has not paid any royalties. They have asked that he bring his books into court for an accounting.

Operators and refiners are anxiously awaiting news from Federal District Judge C. C. Cavanah, who began hearing testimony September 13 in the suit of the oil administration for an injunction to prevent a Boise, Idaho, company from unloading two shipments of East Texas gasoline, alleged to include some gasoline made from illegally produced oil.

Control Bill Hearings Opened at Washington

(Continued from Page 9)

Texas Panhandle, Oklahoma City and Sugarland Fields as an illustration of conservation.

Estimates of Recovery

H. C. Miller, Bureau of Mines, said estimates of recovery under different methods indicated the inefficient recover 10 to 20 per cent and the efficient from 20 to 30 per cent. If gas is retained in the top sand and figuring on water pressure, the recovery may be from 30 to 60 per cent. Bradford will produce in the end about 40 per cent of the oil in the sands, repressuring bringing about 15 to 25 per cent more yield than was possible before.

Energy wasted in producing will result in an ultimate loss of between 500,000,000 and 600,000,000 bbls., as much as all the wells in the United States can produce in six months.

The Texas gas utilization law, he said, was ruined when the stripper law was passed, allowing manufacture of component parts of natural gas with resulting loss of pressure. He stressed the unit plan of operation as the best plan and recommended it as a federal law.

Gasoline Yield

A. J. Kraemer, Bureau of Mines, said the gasoline yield could be greatly increased by relaxing motor fuel specifications. During a detailed explanation of the technical aspects of refining he stated there was no analysis of refinery costs available. The return from refined products to the independent refiner is about 85 per cent of the cost of a barrel of crude laid down at refinery.

H. A. Breakey, of the Petroleum Administrative Board staff, explained the method of arriving at the demand for gasoline under the Federal allowable. During the post-code period supply exceeded demand, he said, and for a short while in 1931, but since 1930, as a whole, consumption has exceeded production.

Representative Mapes asked why legislate to control oil if that is so. Such a statement leads to conslusion that legislation should be passed which would keep one part of the country from producing above demand of that part of country.

A. H. Redfield, Bureau of Mines, explained the present status of exports and imports, showing there was a present excess of importations over the limit fixed by the executive order in conjunction with the code of about 3 per cent. In 1933 imports amounted to only 4 per cent of domestic and export demand.

Mr. Swanson, of the Petroleum Administrative Board, explained the interstate movement of crude and refined products based on monthly reports of Bureau of Mines. Crude is shipped from Texas into 18 states, mostly by water to the East Coast. Oklahoma ships to 13 states, mostly by pipe line. The majority is used to manufacture gasoline. Texas ships gasoline to 42 states, Oklahoma 32, Kansas 23, with interchange between the three. The figures on gasoline are supplied by railroads in the three states by virtue of state laws and supplied to the Petroleum Administrative Board by the Division of Investigations of the Department of the Interior.

RETAIL PRICE CHANGES

(Continued from Page 26)

cent in Burlington. September 11, reduced tank wagon and station gasoline 1 cent in Manchester.

Magnolia Petroleum Co., September 17 advanced tank wagon and station gasoline 1 cent in Houston. September 13, reduced tank wagon and station gasoline 1½ cents in San Antonio.

LOW-COST MAINTENANCE IS WHAT COUNTS

A reckoning that looks at the cost of installation alone and not at the cost of maintenance is not a true gage of pipe-line investment. How much will it cost to keep the system going year after year?—that is the important question. The answer depends largely on the pipe that is used.

After considering everything involved, again and again those responsible for large pipe-line projects have found in NATIONAL Pipe their best assurance of low-cost maintenance and of profitable investment. They have always found NATIONAL—

1. Strong enough to sustain the highest pressures.
2. Ductile enough to bear the most abnormal strains during installation and afterward.
3. Durable enough to give long service under all conditions to which pipe is exposed.

The experience and knowledge of the world's largest manufacturer of tubular products are incorporated in the scientific production of NATIONAL Pipe. It is made under the strictest mill supervision, in full conformity to the latest standard specifications. That is why engineers and field men on major gas lines usually prefer NATIONAL Pipe. General approval has made it—

America's Preferred Line Pipe

NATIONAL TUBE COMPANY • Pittsburgh, Pa.
Subsidiary of United States Steel Corporation

NATIONAL PIPE

Refiners in Chicago Territory Hopeful of Better Prices Later on in the Year

By SPECIAL CORRESPONDENT

CHICAGO, Sept. 17.—Trade transactions continued to drag in gasoline and most other products in the Chicago tank car market here the last few days, with the national gasoline buying program still the subject of active discussion wherever oil men gathered. Buying remained at a low ebb. While most of the talk indicated sentiment had veered to a little more optimistic vein, outcroppings of low-priced gasoline offers served to keep conditions in an uncertain and unsettled state.

Jobbers absolutely refuse to take the slightest amount of gasoline they do not need. Their stocks look to be extremely low. They are not persuaded that any substantial rise is likely as the result of co-ordinated buying and do not wish to speculate on the possibilities. On the other hand, refiners are in a somewhat more cheerful mood, and do not wish to sell any more than necessary now on the theory they will be able to realize more for their products later. So far as crude is concerned, belief here is that the danger of an immediate crude price cut is past. However, all sellers are complaining that tank car market spot business is slack.

Leveling Off May Help

The recent leveling off of tank wagon and service station gasoline prices in Standard of Indiana territory by establishing a new and lower normal price level is variously interpreted but a large section of the trade seems to feel that it may have been on the whole a stabilizing move. At any rate, for the first time in many months there is now a fair semblance of regularity about the general territorial market, with tank wagon and service station prices now 2 cents apart in practically all cases. At the same time Standard's new policy on commercial business in Chicago, including the marketing of a new gasoline, is causing considerable interest. It is no secret that the competition for commercial business, especially in Chicago, has been growing keener. Several major companies, which have held large pieces of commercial business for long periods in the past, have lost some of them in the last few months. To a limited extent, the same situation has existed with increasing acuteness in some other points.

Stabilization committees are busy in more and more areas. They hope now to maintain the present structure and, if the tank car market strengthens, to lay the ground for higher retail prices in most sections. Complaints as to code violations are still coming in in large numbers, and there is much pressure for large-scale prosecutions of violators. But prosecutions are still being held up.

Ask Rush Shipment

A little more interest is being displayed, especially by the trade in northern regions, in autumn and winter grades of motor fuels. They are inquiring into distillation test results, etc. Moreover, most of the trade, regardless of where situated, is still anxious to get rush shipment on such material as they order. Their retail business in general appears relatively good at this time, indicating persistently good consumption for the most part. Touring of course has tapered off considerably.

Kerosene

A strange disparity exists in the market position of kerosene and that of distillates. Kerosene is almost going begging around 3 cents but immediately below it good heating oils are strong and in active demand. Farm demand for kerosene, although better than a few weeks ago, is

(Continued on Page 42)

Crude Oil Prices

(Continued from Page 25)

Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.31
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co.; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective May 1, 1934)

Bradford, Pa.	$2.55
Allegany, N. Y.	2.55

SOUTH PENN OIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.55
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.22
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.17
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.07
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.32

PENNZOIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil In National Transit Lines:	
Group A	$2.47
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.40
Includes Titusville district.	
Group C	2.40
Includes Turkey and Tidioute districts.	
Group D	2.44
Includes Bear Creek and Porkey districts.	
Group E	2.42
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective May 1, 1934)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.08
Midland, Mich. (Sept. 30, 1933)*	1.02
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$0.98

*F.o.b. ship, based on June transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.66	.72	.72	.69	.72	....	.69	.67	.68	.65	....	.66	....	....	....	.66
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.16	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field; 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 33 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 53 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

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Increased Wildcatting in Southwest Texas Area; New Fields Indicated in Hidalgo and Bexar

SAN ANTONIO, Tex., Sept. 17.—Increasing wildcatting and rapid development of proven areas throughout Southwest Texas, with some promise of two new fields in Hidalgo and Bexar Counties were the outstanding features during the week. A total of 17 locations was announced for the 21 fields in the Laredo district, assuring the counties of Webb, Duval, Jim Hogg and Zapata a real drilling program. In the Cole Field, near the Bruni townsite in Webb County, development has taken an added spurt and is now one of the most active fields in the Laredo district. Two wells are nearing the deep sand around 3,420 feet, O. W. Killam's No. 25 Bruni, southwest of Cole Petroleum Co.'s No. 85 Benavides, was cementing off the bottom of the hole, after testing 25 fourbles of oil and 3 fourbles of water from 3,408-3,417 feet. Same operator's No. 26 Bruni, one-half mile southwest of the two United Production Corp.'s producing wells, was coring below 3,400 feet late in the week after testing salt water in sand at 2,977-3,000 feet. Another important well in the townsite was Herman Brown's No. 1-A M. Bruni estate. It made a drill stem test from 2,548-58 feet and tested 180 pounds pressure. A sand from 2,558-61 feet tested 16 joints of slightly cut oil. Late in the week the operators had cemented casing and will make a test from 3,411-31 feet. Six other tests just started are not down far enough to be showing anything of importance.

Hidalgo County

In the southwestern part of Hidalgo County, Otto Woods' No. 1 John Lawrence, wildcat, standing some time with casing cemented on top the sand, drilled plug Friday and is reported to have flowed oil naturally as the drill stem was being taken from the hole. Although no gauge has been taken it is said to have filled the slush pit, and is shut in until a screen and packer can be set and tubing run. It is in Tract No. 274, Porcion 39, Ancient Jurisdiction of Reynosa. It opens the first producing field in the county. Davis and Harrison's No. 1 Mrs. Lula George, another wildcat in the southwestern part of the county and only 1½ miles east of the Woods' test is being drilled to contract depth of 4,500 feet despite two gas blowouts while trying to make a drill stem test of a sand cored from 4,109-35 feet. It made salt water when cleaned and bailed.

Bexar County

Paul Meaders' No. 1 Cantu, 16 miles east of San Antonio in the eastern part of Bexar County, has the appearance of opening a new field from a shallow sand found at 1,490 feet. The operators lost the packer in the hole while trying to make a drill stem test. The sand was reported to have been topped at 1,490 feet and oil covered the pit. The test was started as an Edwards lime test, but is not yet out of the Austin chalk and is believed to be about 500 to 600 feet above the Edwards lime. Provided it makes a commercial producer it will open an entirely new field.

Bee County

In the West Tuleta Field, Bee County, Blanco Oil Co. and Al Buchanan's No. 1 Peres, more than a half mile southwest of production, is being watched while it cores deeper from 3,920 feet. It topped the Pettus sand at 3,886 feet and was cored to 3,920 feet with 5 feet of sandy shale at the bottom. An eleven-minute drill stem test was made from 3,884-98 feet with 450 pounds working pressure on a one-fourth inch choke on bottom and a five-sixteenths inch choke on top, showing dry gas. The sand section appears to be about 20 feet thick, with the upper part showing nothing but gas while the lower part was reported to have been well saturated. It will double the length of the field if it makes a producer. One completion was registered. Circle W Oil Co.'s No. 1 Rapp, south of Dirk Brothers' No. 1 Rapp, a producer, topped the Pettus sand at 3,890 feet and was completed for 10 bbls. an hour at a total depth of 3,903 feet. Wrightsman Oil Co. has made 5 locations in the SE Section 6 of the Ragsley Subdivision of the Uranga grant. The tests are on a 160-acre lease, east of the E. M. Jones producers.

In the old Grayburg area, north of Mineral in Bee County, Mid-Continent Crude Oil Co.'s No. 1 Kimball was reported showing 150 pounds tubing pressure and 350 pounds casing and was making around 125 bbls. of oil daily. It is bottomed at 3,551 feet and is near wells drilled three or four years ago which made some oil for a short time.

Starr County

Porter Evans' No. 1 Kelsey-Bass is a new location for Starr County. It is about 2½ miles west of Rio Grande City in Section 17, Ancient Jurisdiction of Camargo, about 12 miles south of shallow production in the North Los Olmos Field. It is scheduled to be drilled 1,500 feet. In the northeastern part of the county, C. R. Borah is drilling at 1,135 feet on his No. 1 Arcadio Guerra in Share 6, San Ramon grant. It is to be a 2,500-foot test. Sun Oil Co. is reported making plans for a deep test southeast of the Guerra Pool block.

San Patricio County

In the southern part of San Patricio County, 2 miles west of Portland, Gum Hollow Oil Co. has made a proposed location for a wildcat on the John G. Willacey lease. Actual foot measurements have not been released, but the operators are rigging up and drilling is expected to get under way the first of the week.

Frio County

Amerada Petroleum Corp.'s No. 2 Halff and Oppenheimer, a deep wildcat test in Frio County, was drilling below 8,366 feet in the Glenrose lime and has shown nothing of importance. It is in the J. H. Gibson Survey No. 16.

Guadalupe County

In Guadalupe County, Texio Oil Co. and others' No. 1 Mauermann, an interesting wildcat south of the Darst Creek Field, has been abandoned at 3,626 feet in the Edwards lime topped at 3,575 feet. Another interesting test is L. E. Trout's No. 1 McKee spudded during the week. It is 1¼ miles west and updip from the Mauermann dry hole. Southwest of the Darst Creek, Johnny Clark's No. 1 Roughgarden, a wildcat, is expected to resume drilling the latter part of the week after being shut down at 2,340 feet in the Georgetown lime topped at 2,328 feet. It is reported to be checking high, based on top of the Austin chalk, and is expected to reach the Edwards lime within a few days.

Duval County

After an electrical coring test which showed nothing of interest the deep wildcat of Sun Oil Co., No. 1 Moreno, 5 miles south of San Diego, in Duval County, has been abandoned at a total depth of 6,902 feet. It is in Section 537 in the H.&W. Survey.

In the Driscoll Field, Duval County, Continental Oil Co. is rigging up for its No. 3-A Clara Driscoll Sevier, 500 feet from the south line and 2,000 feet from the west line of Survey No. 23, and northeast of the first two wells drilled in Survey No. 448. This is the third test by the company on the Driscoll ranch leased almost a year ago. No. 2-A Driscoll was completed last week for a 50,000,000-foot gasser.

Goliad County

North of the North Pettus Field in Goliad County, interest is centered on Fred K. Foster and others' No. 1 Bordon, a wildcat in the Alberto Guitterez Survey, drilling in search of the Yequa horizon. It failed to pick up the Pettus sand the latter part of the week, and is coring below 4,200 feet.

Gonzales County

In Gonzales County, H. H. Weinert has spudded his No. 1 Koilles, a wildcat near Belmont in the western part of the county, near the Guadalupe County line, in the Ira Nash Survey. A block of 11,000 acres has been completed by E. H. Van Rossum in the northwestern part of the county extending southwest from Thompsonville for the purpose of drilling a 4,000-foot test to the Edwards lime. It is expected to get under way in a few weeks.

Karnes County

It is reported the California Oil Co. is to drill a wildcat test on the J. C. Tom, Jr., ranch in the southeast part of Karnes County and that bids are being made for drilling.

Wildcat Operations in Southwest Texas

Week Ending September 15

ATASCOSA COUNTY

Don Magahan's No. 1 Donna Farms, 3,450 ft. from SE line and 9,100 ft. from NE line of the Barbara Sanchez Sur.
T.D. 4,008 ft.; drill stem stuck.

BANDERA COUNTY

A. P. Crane & Co.'s No. 1 Watson, 988 ft. NE line, 926 ft. SE line, Sec. 71, Antonio Curvier Sur.
T.D. 1,762 ft.; sandy shale.

Peerless O. & G. Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (8 mi. SW of Medina).
Set 500 ft. of 15¼-in. csg.; S.D.

BASTROP COUNTY

Champion et al's No. 1 Charles E. Anderson, Antonio Navarro Sur.
S.D. 850 ft.

BEE COUNTY

Earl Calloway's No. 1 George Ray, 330 ft. from E line, midway between N and S lines of George Ray 208.7-ac. tract in Blanchard Sur., 3 miles SW of Tuleta Field.
Location.

Grimes et al's No. 1 Allen, 1⅛ miles W of Pawnee, Ben Odem Sur.
Abd. 2,230 ft.

Hardy McCullough et al's No. 1 M. T. Fox, 1,060 ft. from NW line and 330 ft. from SW line of lease, E of Caesar Field.
No report.

Mid-Continent Crude Oil Co.'s No. 1 Kimball, S. Winship Sur., 690 ft. most westerly W line and 1,525 ft. N line of survey.
Sand 3,546-52 ft.; set screen.

Worth Oil Co.'s No. 1 Rutledge, 1,000 ft. from N line and 300 ft. from E line of A. Hadley Sur
S.D. for D.P. 1,200 ft.

BEXAR COUNTY

Lloyd Bender's No. 1 Evans, 1,200 ft. from W line, 200 ft. from N line of 313.7-ac. tract in de la Garza Sur.
T.D. 1,028 ft.; S.D.; moving in larger boiler and pump.

F. T. Chew's No. 1 C. S. Ogden & Brooks, 50 ft. E line, 2,500 ft. from Mitchell Lake, on 1,500-ac. tract, Irrigated farms.
Drlg. 350 ft.

M. J. Crouch's No. 3 Hoch, 1,500 ft. N of Medina River, 200 ft. W of E line of 239-ac. tract and 1,250 ft. NE of No. 2 gas well.
Spudded in.

Dr. Dickens' No. 1 Victor Gella, 150 ft. NW line and 150 ft. NE line of Cardines No. 25 Sur.
Moving in.

Linda Oil Co.'s No. 1 Tomasi, Ignacio Perez Sur., 7,694 ft. NE along W line from SW cor., 450 ft. SE of NW line.
No report.

McFee & Briggs' No. 1 Carter, Manuel De Luna No. 3 Sur.
Spudding.

McFee & Briggs' No. 1 Clark, 160 ft. NE line and 2,625 ft. SE line of C. Thieme Sur., 4 miles S of Thelma.
Rigging up to pump, 895 ft.

Mac'Rina Oil Co.'s No. 1 Hendricks, 700 ft. S line, 400 ft. W line of 103-ac. tract, County Blk. 491, C. A. Yoakum Sur. No. 39.
T.D. 1,050 ft.; changing rigs.

Paul Meador's No. 1 Wm. Cantu, 305 ft. from SW line, 1,750 ft. from SE line of 50-ac. tract in Jose M. Ariola Sur., eastern part of county.
T.D. 500 ft.; drlg.

Noble & Nakin's No. 1 R. W. DeVilbiss, 300 ft. E line and 1,050 ft. N line of tract, or 300 ft. E line and 4,800 ft. S line of J. W. DeVilbiss Sur., 1 mile W of Thelma.
S.D. for D.P. 1,050 ft.

BROOKS COUNTY

Cole Pet. Co.'s No. 1 Ulrich, 785 ft. E line, 1,323 ft. S line of C.C.S.D.&R.G.N.G. Sur. 7.
Drlg. shale 3,161 ft.

Mrs. Florence East's No. 1 Madrigal, Rafel Garcia Salinas grant, 300 ft. S line and E line, Share B.
T.D. 480 ft.

CALDWELL COUNTY

S. S. Cargill's No. 2 Damereau, 150 ft. from W line, 450 ft. from N line of D. Cooper Sur.
Abnd. 3,277 ft.

F. P. Hynes et al's No. 1 Tramwell, 750 ft. from SE line and 330 ft. from NE line of tract in Ester Berry Sur.
No report.

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,600 ft. SW line and 4,300 ft. SE line of Barnard Klekant Sur.
Drlg. 2,258 ft.

Montevista Oil Co.'s No. 1 W. I. Pope, 1,000 ft. from W line and 1,750 ft. from S line of J. D. Rains Sur., in I. Rains Sur.
S.D. 2,725 ft.

M. C. Moore's No. 1 Lackey, 440 ft. NW line, 150 ft. NE line of Lackey's 193.75-ac. tract, or 450 ft. NW line and 2,600 ft. NE line of Damon Sur.
Abd. 2,718 ft.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebana Estate.
Setting up machinery.

DUVAL COUNTY

Grimes et al's No. 1 M. Serna, 330 ft. N and W lines of Sur. No. 336.
Rig.

Harvey & Henderson's No. 1 Serma, 330 ft. from N line and 330 ft. from E line of S½ of Sec. 334.
Drlg. sandy shale 2,605 ft.

Holland Oil Co.'s No. 1 Wood Welder, 1,450 ft. N line and 1,580 ft. W line of Sec. 211.
Standing 2,112 ft.

O. R. Jeffers' No. 1 Cadena, 1,000 ft. from N line and 330 ft. from E line of Subd.

(Continued on Page 46)

NORTHERN MEXICO

In northern Mexico four interesting wildcats are drilling and a fifth is reported ready to start up. Continental Oil Co.'s No. 3 Carlos Cantu, 60 miles southwest of Reynosa, Mexico, across the Rio Grande River from McAllen, is drilling below 4,850 feet. Ohio Tex Oil Co.'s No. 2 Rancherias, several miles southeast of Rio Grande City, Tex., but across the Rio Grande in Mexico, was spudded during the week and is drilling below 300 feet. No. 1 Rancherias encountered heavy gas blowouts at 468 feet and 1,200 feet when drilled several months ago. A deep test scheduled to be drilled to 6,500 feet by the Compania de Petroleo Mexicana El Charro is scheduled to resume drilling soon after having set 470 feet of surface casing last week. The test is carried as No. 5 Rio Bravo.

Mexican-Gulf Petroleum Corp.'s No. 1 San Ambrosio, about 40 miles southwest of Nuevo Laredo, Tamps, is drilling below 5,715 feet. Derrick is reported to be completed and machinery moved in for a wildcat to be drilled by the Compania de Petroleo Mercedes, S. A., for its No. 1 Encantada, near the town of Ochoa, a short distance from the Tamaulipas-Nuevo Leon State line west of Reynosa.

Strike East of Hendricks Pool Thought Likely to Open Winkler County Drilling Campaign

By L. E. BREDBERG

Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Sept. 17.—West Texas has been gradually beating back to the days when it held the attention of oil men and was the wildcatter's greatest playground, when new fields were being brought in throughout almost the entire Permian Basin and in counties flanking it on east and west. A strike this week will add greatly to the returned prestige of the district, lost when the East Texas Field was proved for 40 miles north to south years ago.

Companies and independents have been purchasing royalty and leases in the district for the past year whereas during the three previous years they turned heads away from this sector. Blocks and checkerboard acreage have been taken in many counties ignored during the past several years, and wildcats are again going down in various counties throughout the basin. Humble Oil & Refining Co.'s strike in Andrews County, the strike of C. J. Davidson in northwest Ector, and the extending of the Addis and Cowden Pools in this county, coupled with extensions of other pools in other counties, has drawn attention back to it.

Winkler County

This week Skelly Oil Co.'s No. 1 S. M. Halley, about 3 miles east of the southernmost end of the Hendricks Field, Winkler County, came through as a good sand producer at 3,112 feet from a pay corresponding to some of the wells previously completed on the "back" or east side of the Hendricks Field, on the Walton and Clapp ranches, and also similar to the pay found in Sid Richardson's well on the Sealey estate, in the same area. However, the Hendricks and other pools in this part of the district are producing from lime and sandy lime, and this new pay horizon, found to the east of the Hendricks, may open a drilling campaign on a trend paralleling that and other pools running from the south to the north, even into New Mexico. It gives the operators one more pay horizon to shoot at.

The new well, 2,200 feet from the north and east lines of Section 25, Block B-11, Public School Lands Survey, came in making 382 bbls. of 32 gravity oil at 70° in 16 hours, this flow including the head built up due to being shut in for 10 days waiting on storage and pipe line connections. Pay streaks were found at 3,017-21 feet and 3,025 feet, the best pay horizon being logged at 3,105-12 feet. What the well will make on settled production can only be estimated, but it looks good for at least 250 to 300 bbls., and possibly better. How production holds up in this sand formation is yet to be seen.

Ector County

Landreth Production Co. and others' No. 1 Clarence Scharbauer, in Section 20, Block 33, Township 1n T.&P. Survey, northwestern Ector County, is being deepened below 3,990 feet. It encountered an estimated 100,000 feet of gas in lime at 3,964 feet, but showed no change when deepened. Elevation is 3,162 feet. This test is approximately 6 miles southeast of C. J. Davidson's No. 1 Cummings, which is about a 25-bbl. well at 4,509 feet after shooting and acidizing. If the Scharbauer test makes a well there is the possibility of the two making a pool about the size of the Penn Pool in the southern part of the county. However, it remains to be seen whether it comes through as a producer, making an extension well from the Davidson producer, or possibly opening up another pool in the county, which now has six separate producing areas. Brown lime was topped in the test at 3,710 feet. The Cowden Pool, northern Ector County, registered its largest well, when shot this week. It responded with a 1,145-bbl. flow after shooting with 300 quarts from 4,140 to 4,230 feet. Prior to shooting it made only 13 bbls. per hour from broken pay logged at 4,150 to 4,245 feet. This well is owned by Stanolind Oil & Gas Co. and is No. 7 Cowden, 440 feet from south line and 2,312 feet from the west line of Section 34, Block 43, Township 1n, T.&P. Survey. Several recently drilled tests have come in for good wells in this field, and some wells recently shot have responded with considerable increases in production. This pool is gradually being extended except to the southwest, where it has been defined, a small well to the southeast also marking the limits in that direction. It bids fair to making a field of major importance and companies owning acreage are drilling, whereas the pool lay idle for almost two years after two wells, the discovery and a second well, were completed. Humble Pipe Line Co. has a line into the pool.

Andrews County

Andrews County's interesting wildcat, Honolulu and Llano Oil Co.'s No. 1 J. E. Parker, in Section 7, Block A-44 P.S.L. Survey, southeast of the Deep Rock Pool, is still fishing for tools. Total depth is 4,490 feet.

Pecos County

Tex-Mex Oil Co.'s No. 1 Netterville, a wildcat in Section 59, Block 8, H.&G.N. Survey, northwest Pecos County, which has been spraying about 5 bbls. of oil per day with a considerable amount of gas at total depth of 2,210 feet, has drilled to a total depth of 2,260 feet and is reported making from 12 to 15 bbls. per day with an estimated 5,000,000 feet of gas. It is about 5½ miles west of Grand Falls and presages the opening of another sand pool. The small shallow Pecos Valley Pool is just a few miles southeast, the pay in this new discovery corresponding to the horizon in that pool which has been producing for about six years.

Reeves County

Grisham Hunter Corp.'s No. 1 fee, in Section 10, Block 30, Township 8 T.P. Railway Survey, Reeves County, is due for a test of the Delaware sand from which it encountered a showing of oil from core claimed to have been taken from 5,203-12 feet. A former drill stem test from 5,154-5,227 feet showed only water. The owners, feeling that the water is coming from up the hole, contemplate setting pipe to shut it off. It is an extreme wildcat test.

Glasscock County

Two tests in the southwestern part of Glasscock County have been abandoned, erasing two localities near each other. Currie and others' No. 1 J. L. Calverly, in Section 24, Block 36, Township 4s, T.&P. Survey, was given up as dry at 3,701 feet. Moore and others' No. 1 Hubbard-Gulf, in Section 16, Block 34, Township 5s T.&P. Survey, was abandoned at 3,245 feet. The latter struck sulphur water at 3,235 feet in lime. The former had an elevation of 2,699 feet, but did not drill into water. The Moore and others test is 11 miles east of the Currie test.

Big Lake Test

Big Lake Oil Co., which recently completed its No. 15-C University as a one-quarter mile northwest extension to the deep pay area, has started on another test. No. 16-C is to be 97 feet from the north line and 509 feet from the west line of Section 25, Block 9, northeast of No. 15-C. The company will continue drilling to find out how far the deep pay strata is to extend. The company is drilling its deep tests in with oil, having better success with this method, and incurring no trouble in bringing in the wells or keeping them under control as the heavy gas volume increases.

Several companies have geophysical and seismograph crews busy in various parts of the Permian Basin, much being done throughout the counties of Andrews, Gaines, Yoakum and as far north as Cochran County, where independents and companies alike have been taking blocks and checkerboarding acreage. Crews have also been working in other parts of the district, while more geologists have been assigned to work in the district by various companies. Several new scouts have been assigned or shifted to the basin territory, showing the trend of interest again displayed in West Texas.

Wichita Falls

An increase in the number of locations staked in the Ranger and Wichita Falls districts, the starting up of many rigs shut down during the past two months, and the completion of more tests in these districts was reflected this week after heavy rains filled water holes, tanks and reservoirs, furnishing the long-needed water supply for drilling purposes. There were 34 completions in the Wichita Falls district, 19 producers and the remainder dry. Archer and Young Counties furnished the bulk of the completions, Lindsey Drilling Co. giving up a deep test in Young County, at a total depth of 4,408 feet. It had showings of oil and was given a shot to no avail.

King Royalty Co. has opened more possibilities for Wichita County by bringing in the best saturated lime producer in the county on its Waggoner lease. The well is No. 1-I Waggoner and is in the J. Bradley Survey. It logged saturated lime at 1,963-74 feet which showed for only 1½ bbls. per day. After treating with 1,500 gallons of acid under 110-bbl. load and 300 pounds pressure the hole filled 1,200 feet with oil in one hour after acid was cleaned. It later swabbed 65 bbls. in one hour and on a four-hour test averaged 40 bbls. swabbing. The well is now shut in for storage and pipe line connections looking good for at least 700 or 750 bbls. per day.

B. Bender and others of Dallas have taken a 5,000-acre block centering in the Wesley-McMahan Survey, about 7 miles northeast of Decatur in Wise County and have contract calling for a 3,750-foot test to be spudded by December 1. This is an extreme wildcat area.

D. S. Hood and E. L. Moon have blocked around 8,000 acres and intend taking another 7,000, centering in the M.E.P.&F. Survey No. 237, Parker County, contracting to drill a 3,500-foot cable tool test to be spudded by December 1. This will also be an extreme wildcat test, if drilled.

A test is to be spudded about 3 miles north of Clyde in Callahan County by November 1, in an area tested by three dry holes drilled in the section to the west and two in the section to the north, several of which had good showings of gas in the shallow pays. D. C. Barclay and Roy Guffey of Ranger have assembled a 2,000-acre block in this area, centering in Section 69, B.B.B.&C. Survey, and are to drill a 2,500-foot cable tool test.

J. W. Moore and Sons, Inc., of Lubbock, who last year obtained gas fran-

(Continued on Page 41)

Wildcat Operations in West Texas

Week Ending September 15

ANDREWS COUNTY

R. S. Bond et al's No. 1 McCarley, 1,320 ft. from N and W, Sec. 29, Blk. 3, P.S.L. Sur.
Drlg. 925 ft.

Honolulu and Llano Oil Co.'s No. 1 J. E. Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
S.D. 4,487 ft.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
Underreaming pipe; T.D. 1,825 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 1,980 ft. from S and 1,487 ft. from W, Sec. 6, Blk. A-19.
Drlg. 1,422 ft.

BREWSTER COUNTY

Joiner-McIntyre's No. 1, 353 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
S. D. 2,100 ft.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
S.D. 2,660 ft.

CRANE COUNTY

Continental Oil Co.'s No. 1 M. Dawson, 1,320 ft. from N and 440 ft. from E, Sec. 30, Blk. X.
Machine.

Gulf Prod. Co.'s No. 1 E. M. Snodgrass, 1,320 ft. from N and 1,320 ft. from W line of Sec. 1, Blk. B-25, P.S.L. Sur.
17 bbls. oil per day 3,390-3,491 ft.; shot; T.D. 3,500 ft.; went dead after flowing; cleaning out and swabbing.

CULBERSON COUNTY

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Fishing 423 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
Drlg. 1,245 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.&R.R. Sur.
S.D. 2,957 ft.

ECTOR COUNTY

Continental Oil Co.'s No. 1-A Kloh, 440 ft. from N line and 2,200 ft. from E line, Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
To shoot; T.D. 4,218 ft.

C. J. Davidson et al's No. 1 Cole, 660 ft. from N line and 660 ft. from W line of Sec. 10, Blk. 45, Twp. 1n, T.&P. Sur.
Shut in; storage full; T.D. 4,509 ft.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Rigged up.

Landreth Prod. Co.'s No. 2-A Texas Pacific Land Trust, 441 ft. from N line and 440 ft. from W line of Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 4,275 ft.; plugged back 4,248 ft.; flowing 10 bbls. oil and 10 bbls. water per day.

Landreth Prod. Co.'s No. 1 Clarence Scherbauer, 660 ft. from S and E. lines of Sec. 20, Blk. 44, Twp. 1n, T.&P. Sur.
Drlg. 4,000 ft.; gas at 3,964 ft.

Phillips Pet. Co.'s No. 1 Kloh, 440 ft. from E line and 440 ft. from S line, Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,685 ft.

Shell Pet. Corp.'s No. 3 Jones, 2,310 ft. from S line, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.
Drlg. 3,042 ft.

Skelly Oil Co.'s No. 1 Scarborough, 617 ft. from S and 660 ft. from E, Sec. 26, Blk. B-15, P.S.L. Sur.
Drlg. 590 ft.

(Continued on Page 45)

Drilling Pace in the East Texas Field Increasing; Limestone and Navarro Counties Get Play

By L. E. BREDBERG

DALLAS, Tex., Sept. 17.—There were no locations staked in the East Texas district during the week and only three such tests were marked for abandonment. Only one Trinity sand test is now attracting attention, the other being held up by a fishing job.

There were 64 locations in the East Texas Field this week and 63 tests completed. There are now over 14,500 producing wells in the field. The drilling pace is increasing the density of wells at the rate of nearly 10 each day, and also cutting down the per well allowable with the exception of those carried as marginal. The daily average well allowable is now a little below 29 bbls. The spacing rule of the Railroad Commission is apparently only something to talk about.

Distribution reports from the field for the week ending September 13 showed a daily average of 411,260 bbls. run through trunk lines. Runs to local refiners decreased this week, falling to 83,080 bbls. whereas tank car shipments increased to 1,869 per day. Daily average distribution was 496,209 bbls. whereas daily average reported production was 423,807 bbls. This shows total daily average deliveries over and above reported production as 72,402 bbls.

Cherokee County

Milhoan Drilling Co.'s No. 1 O. R. Perkins, in the J. M. Martinez Survey, near Ponta in northeastern Cherokee County, has marked another sector dry. It cored from 5,209-16 feet, recovering sand showing some oil. A drill stem test made with packer set at 4,197 feet, however, showed 2,000 feet of salt water in eight minutes, with no oil or gas, and the test is to be abandoned. South Gulf Oil Corp.'s test in this same sector, on the Joe Bailey farm, in the L. R. Rhodes Survey, cored from 4,310-20 feet and recovered 6 inches of shale. It previously tested salt water at 4,133 feet, and does not have the best of appearances.

Peyton Brothers and others' No. 1 Steubenrach, in the P. Varela Survey, a Trinity sand test on the west side of the Mexia Field, Limestone County, will be closely watched when test is made. Plug has been drilled and tubing run preparatory to testing. Total depth is 5,704 feet and casing was set at 5,560 feet. Several showings of oil led to the setting of pipe and running of tubing preparatory to testing the lime strata which carried oil shows.

Wheelock and Collins' No. 1 Cerf, on the west side of the Corsicana-Powell Field, Navarro County, is held up by a drill stem twisted off at 5,807 feet. Contract depth is 6,000 feet. This too, is a Trinity sand test, but has shown salt water on a drill stem test at 5,420 feet.

W. Goldston and others' No. 1 Southern Pine Lumber Co., dry and abandoned 5,099 feet. Marathon Oil Co.'s No. 9 Kelly, top pay 3,686 feet, total depth 3,687 feet, initial production 72 bbls.

Byrd-Frost, Inc.'s No. 1 Burrows, in the M. Vasacue Survey, northwest of Slocum, in Anderson County, has cored all shale from 5,268-76 feet, with base of the Austin chalk believed to have been logged at the former depth. This test ran high on the Pecan Gap chalk and on top of the Austin, but is expected to show a thickening of the lower sections and run about normal with the first test in the area, which is about 1 mile northwest and drilled by the same operators this year.

Limestone County

Stanley Thompson and others' No. 1 Emma Daniels, in the B. Relling Survey, between the Nigger Creek and Mexia Fields, in Limestone County, may be abandoned at its present depth of 3,501 feet, where it drilled salt water sand. A former test near this one was junked and abandoned at 2,960 feet several months ago.

Navarro County added a failure this week when William C. McGlothlin's test on the Knight farm, in the Armstrong Survey, 3 miles west of Trinidad, was abandoned at a total depth of 3,624 feet. Prest Roe's No. 1 Wiggins, in Smith County, was also given up a dry hole at 4,528 feet.

Rio Oil Corp.'s test on the Easter farm, in the R. Hotchkiss Survey, Rains County, logged base of the Austin chalk at 3,810 feet during the week and is drilling at 3,900 feet. The Pecan Gap chalk was logged from 2,183-2,483 feet, the two formations showing a little higher structural condition than in the nearest test to the north. This test is on a geophysical structure which caused a considerable lease and royalty play prior to drilling.

Killough and Tucker's test on the Young farm, in the J. M. Boone Survey, Leon County, 4 miles southwest of the Long Lake Pool, topped the Pecan Gap chalk at 3,915 feet and is drilling in chalk at 4,025 feet.

Gregg County

Amerada Petroleum Corp.'s No. 7 Tuttle, top pay 3,543 feet, total depth 3,568 feet, initial production 65 bbls. per hour through open tubing. Arkansas Fuel Oil Co.'s No. 30 Burnside, top pay 3,463 feet, total depth 3,488 feet, initial production 64 bbls. in 30 minutes; No. 9 Rembert, top pay 3,474 feet, total depth 3,502 feet, initial production 54 bbls. in 30 minutes. J. G. Beard and others' No. 9 Fuller, location abandoned. Gulf Production Co.'s No. 31 Shepherd, total depth 3,521 feet, initial production 55 bbls. through three-quarters inch choke.

Humble Oil & Refining Co.'s No. 7 Christian, top pay 3,630 feet, total depth 3,668 feet, initial production 71 bbls.; No. 17 Harris, total depth 3,540 feet, initial production 86 bbls.; No. 7 Wells, top pay 3,667 feet, total depth 3,690 feet, initial production 64 bbls. Magnolia Petroleum Co.'s No. 16 Heiman, total depth 3,666 feet, initial production 110 bbls. Phillips' No. 1 Harris, dry and abandoned 3,547 feet. Selby Oil & Gas Co.'s No. 10 Snavely, top pay 3,560 feet, total depth 3,571 feet, initial production 30 bbls. Shell Petroleum Corp.'s No. 6 Saulters, top pay 3,695 feet, total depth 3,705 feet, initial production 30 bbls. in 30 minutes. Sun Oil Co.'s No. 17 Aiken, top pay 3,557 feet, total depth 3,608 feet, initial production 45 bbls. Yount Lee Oil Co.'s No. 7 Jones, top pay 3,573 feet, total depth 3,593 feet, initial production 61 bbls. through eleven-sixteenths inch choke; No. 7-C McKinley, top pay 3,563 feet, total depth 3,583 feet, initial production 50 bbls. through eleven-sixteenths inch choke. Danciger Oil & Refining Co.'s No. 4 McNeeley, total depth 3,615 feet, initial production 75 bbls.

Gulf Production Co.'s No. 7 Hughey, total depth 3,540 feet, initial production 110 bbls.; No. 30 Spears, total depth 3,593 feet, initial production 80 bbls.; No. 10 Strong, total depth 3,707 feet, initial production 60 bbls. Magnolia Petroleum Co.'s No. 20 Hicks, top pay 3,709 feet, total depth 3,711 feet, initial production 64 bbls. Sultana Oil Co.'s No. 1-H Sabine River, top pay 3,519 feet, total depth 3,545 feet, initial production 125 bbls. through 1-inch choke. Thompson's No. 7 Helburn, top pay 3,626 feet, total depth 3,638 feet, initial production 130 bbls.

Anderson County

H. L. Hunt Production Co.'s No. 1 Miller, total depth 5,350 feet, plugged back to gas sand 5,281 feet, initial production 50,000,000 feet of gas.

Navarro County

McGlothlin and others' No. 1 McKnight, dry and abandoned 3,624 feet.

Rusk County

Gulf Production Co.'s No. 5 Hineman, total depth 3,703 feet, initial production 84 bbls. through three-quarters inch choke. Humble Oil & Refining Co.'s No. 14-A Sexton, total depth 3,722 feet, initial production 75 bbls. Standard Oil Co. of Kansas' No. 3 Guerin, top pay 3,793 feet, total depth 3,795 feet, initial production 120 bbls. Amerada Petroleum Corp.'s No. 17 Stovall, top pay 3,648 feet, total depth 3,680 feet, initial production 68 bbls. Atlantic Oil Producing Co.'s No. 4 Bradford, total depth 3,725 feet, initial production 60 bbls.; No. 32 Kinney, top pay 3,590 feet, total depth 3,649 feet, initial production 40 bbls.; No. 7-A Strickland, total depth 3,646 feet, initial production 15 bbls. Carey's No. 2-B Redwine, total depth 3,585 feet, initial production 20 bbls. on air lift. Coffman's No. 4 Thompson, total depth 3,724 feet, initial production 60 bbls. Dearing & Son's No. 7 McDavie, total depth 3,721 feet, initial production 20 bbls. in two hours pumping. Eastern Texas Petroleum Co.'s No. 3 Arnold, total depth 3,677 feet, shot 30 quarts from 3,625-65 feet, initial production 15 bbls. H. B. W. Oil Co.'s No. 11 Redwine, top pay 3,525 feet, total depth 3,770 feet, initial production 20 bbls. in three hours pumping.

Humble Oil & Refining Co.'s No. 9 Caldwell, top pay 3,740 feet, total depth 3,769 feet, initial production 38 bbls. in 21 minutes; No. 8-A Florey, total depth 3,698 feet, initial production 36 bbls. in 24 minutes; No. 3 Simmons, total depth 3,795 feet, initial production 59 bbls.; No. 6 Wooster, total depth 3,779 feet, initial production 58 bbls. Hunt Production Co.'s No. 9-A Hale, top pay

RALPH TALLEY

Head of Land Department of Magnolia Petroleum Co., Dallas, Tex.

East Central Texas Wildcats

Week Ending September 15

ANDERSON COUNTY

Byrd-Frost, Inc.'s No. 1 J. T. Burrow, 250 ft. N of S line, 25 ft. E of W line of M. Vascue Sur.
Coring 5,222 ft.

J. W. Lutter' No. 1 C. McKee, 357 ft. from S line, 340 ft. from W line of 100-ac. tract, W. F. Pool Sur., SE of Frankston Sur.
Derrick.

F. L. Stone et al's No. 1 Tullis, 1,513 ft. from E and 1,000 ft. from S lines of Wm. Johnson Sur., 5 miles S of Rusk.
Location.

Tide Water Oil Co. et al's No. 2 Sullenberger, 467 ft. N and E of 363-ac. tract, Snyder Sur.
Derrick.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 A. G. Godley, 467 ft. N of S line and 1,400 ft. W of E line of lease, S Edmonson Sur.
Completed as gas well.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 W. H. C. Goode, 467 ft. out of most westerly NW cor. of survey, Anderson County School Land Sur.
T.D. 3,945 ft.; P.B. to 3,945 ft.; S.D.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Robertson, 633 ft. from W line and 467 ft. from N line of lease, Samuel Snider Sur.
T.D. 4,119 ft.; testing.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 7 Edens, 1,400 ft. W of E line, 1,400 ft. N of S line of 998-ac. lease, Wm. Snyder lease.
S.D.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1-C N. N. Wills, 477 ft. from S line and 467 ft. from W line of tract, Thomas Bristow Sur.
Location.

Tide Water Oil Co.'s No. 8 Wills, 1,253 ft. E of W line and 467 ft. N of S lineof 832-ac. lease, Samuel Edmondson Sur.
T.D. 4,076 ft.; S.D.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Derrick.

CHEROKEE COUNTY

H. L. Hunt Production Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jackson Oil & Gas Co.'s No. 1 H. D. Henderson, 660 ft. from N and W line of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
Drlg. 90 ft.

Milhoan Drilling Co.'s No. 1 O. R. Perkins, 1,208 ft. from W line of Perkins 164-ac. tract and 655 ft. from N line of lease, J. M. Martinez Sur.
Coring 4,220 ft.

Guy Jameson et al's No. 1 Mullineaux, cen. 20-ac. tract out of NW cor. of SE of T. M. Garrett Sur., 5 miles NW of Maydell.
Location.

Southern Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta, L. R. Rhodes Sur., Abstract No. 724.
Drlg. 4,393 ft.

E. M. Thomason et al's No. 1 Addis Estate, 250 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
Derrick.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D.

(Continued on Page 43)

3,622 feet, total depth 3,750 feet, initial production 21 bbls. pumping. Jenkins Oil Corp.'s No. 15 Jobe, total depth 3,651 feet, initial production 100 bbls. Mid-Kansas Oil & Gas Co.'s No. 75 Grissom, top pay 3,611 feet, total depth 3,617 feet, initial production 54 bbls. Octo Oil Co.'s No. 2 Pinkston, top pay 3,540 feet, total depth 3,618 feet, initial production 20 bbls. in two hours pumping. Sun Oil Co.'s No. 15 Hendon, top pay 3,575 feet, total depth 3,586 feet, initial production 6 bbls. per hour pumping; No. 21 Knight, top pay 3,630 feet, total depth 3,635 feet, initial production 90 bbls.

Smith County

Preston Rose's No. 1 Wiggins, dry and abandoned 4,528 feet.

Henton's No. 6 Mayfield, top pay 3,792 feet, total depth 3,793 feet, initial production 60 bbls. in 30 minutes. Texas Co.'s No. 17 Blackwell, top pay 3,699 feet, total depth 3,718 feet, initial production 78 bbls. Wainwright-West, Ltd.'s No. 1 Irion, total depth 3,724 feet, initial production 100 bbls. Tronnan & West's No. 1 Jackson, total depth 3,784 feet, initial production 100 bbls.

Upshur County

Conservative Oil Co.'s No. 12 Victory, total depth 3,695 feet, initial production 30 bbls. in 30 minutes. East Texas Petroleum Co.'s No. 16 Dunbar, top pay 3,593 feet, total depth 3,605 feet, initial production 20 bbls.; No. 3-A Ray, top pay 3,599 feet, total depth 3,604 feet, initial production 20 bbls. in 20 minutes; No. 1-C Smith, top pay 3,578 feet, total depth 3,583 feet, initial production 20 bbls. in 20 minutes. Oils, Inc.'s No. 9 Saunders, top pay 3,598 feet, total depth 3,612 feet, initial production 45 bbls. in 30 minutes. Gulf Production Co.'s No. 1 Penn, total depth 3,579 feet, initial production 20 bbls. through one-quarter inch choke. Magnolia Petroleum Co.'s No. 1 Free, total depth 3,662 feet, initial production 70 bbls.

Shasta Oil Co.'s No. 2 Florence, total depth 3,586 feet, initial production 60 bbls. Shell Petroleum Corp.'s No. 4 Sanders, top pay 3,697 feet, total depth 3,711 feet, initial production 36 bbls. in 30 minutes. E. L. Smith Oil Co.'s No. 9 Watts, total depth 3,622 feet, initial production 20 bbls. in 28 minutes. Southland Drilling Co.'s No. 9 O'Byrne, total depth 3,668 feet, initial production 60 bbls. Joe Zeppa, trustee's No. 5 Victory, top pay 3,680 feet, total depth 3,681 feet, initial production 25 bbls. Humble Oil & Refining Co.'s No. 14-A Sexton, total depth 3,722 feet, initial production 75 bbls. Standard Oil Co. of Kansas' No. 3 Guerin, top pay 3,793 feet, total depth 3,795 feet, initial production 120 bbls. Weaver-Crim's No. 3 Peterson, top pay 3,666 feet, total depth 3,668 feet, initial production 30 bbls. in 15 minutes.

Van Zandt County

Pure Oil Co.'s No. 12 Tunnell, total depth 2,947 feet, initial production 150 bbls.

West Texas Fields

(Continued from Page 39)

chises in towns in Mills and Lampasas Counties, have spudded a 4,000-foot cable tool test on the G. Wilson land in the northeast half of the J. J. Thompson Survey, Brown County. They have a 3,600-acre block in this area and intend to drill for gas to supply these towns. There are shallow gas producers in this area, consequently this test will be interesting, especially if carried to its proposed depth.

Panhandle District

There were 17 new producers completed in the Panhandle district during the week, adding nearly 4,000 bbls. of oil and 42,000,000 feet of gas to the daily potential. Gray County added 9 of the 17 wells. Wheeler and Hutchinson Counties each had four producers. There were only three locations staked, one each in Gray, Hutchinson and Wheeler Counties.

Production in the Panhandle district averaged 56,385 bbls. per day this week, an increase of 1,625 bbls.

WICHITA FALLS COMPLETIONS

Archer County

Alcorn's No. 1 Prideau, dry and abandoned, 720 feet. Bridwell Oil Co.'s No. 1 Walsh, dry and abandoned 1,760 feet. Continental Oil Co.'s No. 17-E Ferguson, dry and abandoned at 739 feet. No. 1-A Perkins, dry and abandoned 1,647 feet. Fain and McGaha's No. 16 Arnold, top pay 1,202 feet, total depth 1,218 feet, initial production 100 bbls. a day; No. 17 Arnold, top pay 1,187 feet, total depth 1,203 feet, initial production 200 bbls. day; No. 18 Arnold, top pay 1,185 feet, total depth 1,202 feet, initial production 200 bbls. day; No. 21-C Ferguson, top pay 649 feet, total depth 653 feet, initial production 35 bbls. day; No. 22 Green, top pay 1,195 feet, total depth 1,211 feet, initial production 200 bbls. day. Mamie and Featherstone's No. 2 Andrews, abandoned location; No. 3 Andrews, top pay 860 feet, total depth 864 feet, initial production 20 bbls. day. Tex-Ho Oil Co.'s No. 1 Bloodworth, dry and abandoned 1,145 feet.

Jack County

Dobbs Oil Co.'s No. 1 Dobson, dry and abandoned 747 feet. Bartholomew's No. 1 Spearman, dry and abandoned 595 feet. Lewis Production Co.'s No. 1 Keyser, top pay 2,783 feet, total depth 3,335 feet, initial production 5,000,000 feet gas.

Montague County

Continental Oil Co.'s No. 2 Lawler, top pay 1,710 feet, total depth 1,730 feet, initial production 25 bbls. per hour, swabbing. O. V. Beck's No. 6 Davenport, top pay 1,682 feet, total depth 1,691 feet, initial production 25 bbls. per hour.

Wichita County

Golding and Cochran's No. 5-C Waggoner, top pay 1,313 feet, total depth 1,330 feet, initial production 100 bbls. day. King Royalty Co.'s No. 1-J Waggoner, top pay 1,448 feet, total depth 1,453 feet, initial production 80 bbls. day. Petroleum Producers Co.'s No. 43 Allen and Kemp, top pay 455 feet, total depth 463 feet, initial production 7 bbls. day. Reed and others' No. 1 Donavan, dry and abandoned 355 feet. Regal Oil Co.'s No. 1-A Bridwell, dry and abandoned 1,615 feet.

Wilbarger County

Hegralle Oil Co.'s No. 11-A Waggoner, top pay 1,869 feet, total depth 1,877 feet, initial production 320 bbls. day. Phillips Petroleum Co.'s No. 1-F Waggoner, top pay 2,300 feet, total depth 2,330 feet, initial production 109 bbls. oil 79 bbls. of water per day.

Young County

Baker's No. 1-B Donnell, top pay 3,294 feet, total depth 3,305 feet, initial production 60 bbls. oil and 20 bbls. water day, pumping. Glover's No. 4 Clarida, top pay 596 feet, total depth 600 feet, initial production 5 bbls. day. Honea's No. 1 Fee, dry and abandoned 951 feet. Knox's No. 3 Burkett, top pay 2,698 feet, total depth 2,730 feet, initial production 68 bbls. day. Lindsey Drilling Co.'s No. 1 Marshall, dry and abandoned 4,408 feet. Long and Christie Brothers' No. 1 Brazos River Bed, top pay 2,395 feet, total depth 2,415 feet, initial production 408 bbls. day. Magnolia Petroleum Co.'s No. 7 Johnson, top pay 586 feet, total depth 592 feet, initial production 20 bbls. Ozan Oil Co.'s No. 1 Keathley, dry and abandoned 978 feet. Moore and others' No. 1 Gibbs, dry and abandoned 952 feet, Wooten and Reed's No. 1 Hufman, dry and abandoned 665 feet.

WEST TEXAS COMPLETIONS

Glasscock County

Steve Currie and others' No. 1 Underwood, dry and abandoned 3,701 feet.

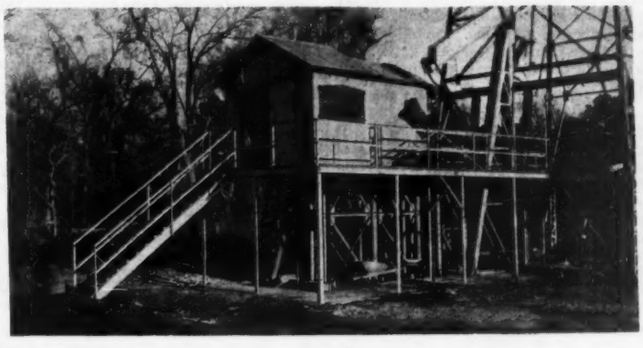
Howard County

Fuglar & Patterson's No. 1 Hyman, top pay 1,313 feet, total depth 1,326 feet, shot 30 quarts 1,313-26 feet, initial production 7 bbls. day, pumping.

Loving County

Harry Adams Corp.'s No. 2-A Reagan-McElvain, top pay 4,287 feet, total depth

Where Beauty as well at Water-Tightness is desired
WILLOW BROOK COUNTRY CLUB SWIMMING POOL
TYLER, TEXAS
Being filled for the first time



Where Flood Waters make it Necessary to Elevate Machinery.
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4,297 feet, shot 200 quarts from 4,249-97 feet, initial production 271 bbls. day.

Pecos County

Cardinal Oil Co.'s No. 4-D Tippett, top pay 1,305 feet, total depth 1,343 feet, plugged back to 1,336 feet, initial production 6 bbls. oil and 100 bbls. water; No. 1 Cummings, top pay 1,405 feet, total depth 1,407 feet, initial production 30 bbls. Phillips Petroleum Co.'s No. 4 Smith, top pay 951-68 feet, total depth 985 feet, initial production 100 bbls., pumping. Marathon Oil Co.'s No. 43-A Yates top pay 1,272 feet, total depth 1,445 feet, initial production 1,485 bbls. in 30 minutes.

Scurry County

Paul C. Texas and others' No. 1 Chapman, top pay 1,700 feet, total depth 1,734 feet, initial production 30 bbls. day, pumping.

Ward County

Atlantic Oil Producing Co.'s No. 3 Barrow, top pay 2,973 feet, total depth 3,065 feet, plugged back to 3,047 feet, initial production 61 bbls. day. California Co.'s No. 11 York, top pay 2,364 feet, total depth 2,526 feet, initial production 185 bbls. day; No. 12 York, top pay 2,355 feet, total depth 2,525 feet, initial production 430 bbls. Farrell & Co.'s No. 5 Pure-Bennett, top pay 2,310 feet, total depth 2,550 feet, initial production 424 bbls.

Winkler County

Sinclair Prairie Oil Co.'s No. 3-B Scarborough top pay 2,898 feet, total depth 3,026 feet, shot 180 quarts from 2,932-3,026 feet, initial production 48 bbls. Magnolia Petroleum Co.'s No. 7 Scarborough, top pay 2,855 feet, total depth 2,980 feet, initial production 103 bbls. Sid Richardson's No. 1 Shell-Scarborough, total depth 3,229 feet, shot 215 quarts from 2,825-3,025 feet, initial production 87 bbls. day. Magnolia Petroleum Co.'s No. 3 Walton, top pay 2,884 feet, total depth 3,063 feet, initial production 43 bbls. day.

Refiners in Chicago Area Hopeful of Better Prices

(Continued from Page 34)

not as large as it might be. Prices are about unchanged.

Heating Oils

On the Nos. 1, 2 and 3 heating oils, supply is limited, so far as the spot market is concerned. Those refiners who have any substantial supply on hand are reserving it for contract purposes and have little to sell. Many distributors of these products were foresighted and took care of their requirements ahead of time, but some still feel they need additional supplies. The drying up of the talk of a crude cut has tended to strengthen these products.

Industrial Oils

Industrial oils are still slack and giving a disappointing performance. There is still a lull in general heavy industries' activity. Steel operations are relatively low, and with reports of extremely low prices on some heavy East Texas fuel, this market is showing no improvement.

Solvents

Solvents and naphthas remain quiet, with little change noted in the price structure. Demand is strictly moderate.

Lubricants

Lubricating oils here remain sluggish and slow, with no new price changes reported. Jobbers and compounders both are still mostly on the sidelines in market participation.

Wax

Wax is also quiet. Volume of inquiries is hardly so heavy as recently, but stocks are not burdensome and tone is still quite healthy.

Coke

Coke shows no material change. Demand has picked up to some extent in a spotty way. Buyers are finding that the available supplies are not overly heavy.

Permits Easy Addition of Cracking Equipment

(Continued from Page 8)

tanks were staggered on the hillside so that all products ran by gravity into the run-down tanks and thence by gravity into the storage tanks. The storage tanks were also at such an elevation that it was possible to load the products at the loading rack, with the exception of fuel oil, by gravity. This greatly reduced the number of pumps required in the refinery which afforded further saving in boiler capacity.

The flow of oil through the plant is conventional in as much as the oil is picked up at storage at atmospheric temperature and charged through the convection bank of the pipe still and thence through two rows in the roof and introduced into an 85-foot fractionating tower.

The products removed under two different operating conditions are shown in tables Nos. 1 and 2. The gasoline is removed overhead as a vapor and liquid side streams of naphtha, kerosene, zero gas oil and heavy gas oil are removed by specially designed internal stripping sections through side stream coolers. Fuel oil is removed from the base of the tower by a hot oil pump.

The processing equipment is very compact with the pipe still heater, fractionating tower, pump house and cooling equipment occupying a space approximately 40 feet by 70 feet. The layout of the plant was unique in as much as provision was made to convert the present equipment into a combination topping and cracking plant at a future date. Provision was made in the pipe still for the future installation of floor tubes and 50 additional tubes in the roof of the furnace. Carbon steel tubes and headers in the pipe still are suitable for cracking conditions of 940° F. temperature and 1,000 pounds pressure. Roof tube supports are of alloy material suitable for high temperatures encountered at cracking conditions. The fractionating tower was located conveniently so as to fit in with the future installation of a flash tower, P.D. bubble tower, and clay treating towers. The pump house and cooling tower were also laid out in a somewhat offset position so as to utilize the most desirable space available with a view of increasing the length when the plant was expanded into a combination unit.

The plant was designed by Ampco,Inc., of Dallas, Tex., and has operated with a capacity of 3,500 bbls. per day practically continuously since completion, the last of March, 1932.

TABLE 1—YIELDS AND QUALITY OF PRODUCTS WHEN MAKING A 420 ENDPOINT MOTOR FUEL

	Gasoline	Naphtha	Kerosene	Zero gas oil	Heavy gas oil	Fuel oil
Per cent of crude	39	3	3	10	10	33
A.P.I.	58.8	44	40	38.7	33.8	17.3
I.B.P.	95	360	400	..	..	..
Endpoin.	420	460	526	594	..	..
Flash	...	...	155	165	195	..
Color	30+	28	25	16	straw	..

Heater outlet, 660 degrees; top tower, 330 degrees; 8-pound tower pressure.

TABLE 2—YIELDS AND QUALITY OF PRODUCTS WHEN MAKING A 375 ENDPOINT MOTOR FUEL

	Gasoline	Naphtha	Kerosene	Zero gas oil	Heavy gas oil	Fuel oil
Per cent of crude	33	5	6	10	10	34
A.P.I.	63.6	46.5	42.4	35.	30	17.5
I.B.P.	96	302	390	...	...	..
Endpoint	375	410	490	590	...	..
Flash	...	120	160	170	200	..
Color	30+	28	25	16	straw	..

Heater outlet, 675 degrees; top tower, 285 degrees; 12-pound tower pressure.

Tests Compare Bottled Gas and Electricity

(Continued from Page 30)

gas burner because it releases its heat units at the point of combustion, which is above the metal of the burner.

Thus far we have compared the respective "speeds" of bottled gas cooking directly on the basis of actual heat units released. It is, however, the number of heat units that may be absorbed by the food that counts. A large number of tests reveal that approximately identical proportions of electrically created heat units and bottled gas created heat units are effective after the transfer from heating element or burner to identical utensils. In both cases this loss is approximately one-half of the released heat. In other words the "efficiency" of the transfer in both cases is approximately the same, or about 50 per cent. For this reason, our comparison on a relative heat release basis has been correct.

Knowing the above facts, anyone can roughly estimate the relative speeds of a given electric unit and gas burner. Example: What is the relative cooking speed of the average 1,500-watt element and a No. 68 orifice bottled gas burner using the same utensil? Answer: The 1,500-watt unit releases one and one-half times 3,412 or 5,118 heat units per hour. A No. 68 orifice releases 6,870 heat units per hour. Therefore, the rate of release from a No. 68 orifice is one and one-third times as great as that from the 1,500-watt (1½ K.W.) electric unit, considering that the electric unit has already heated itself to full heat. However, prior to the instant of full heat, that is, during the self-heating period of the electric unit, the bottled gas burner's heating speed must average twice the above ratio, or two and two-thirds times as fast, because the electric heat flow started at zero while the gas heat flow started immediately at full rate. It is evident that the bottled gas cooking speed in this example will be somewhere between two and two-thirds and one and one-third as fast as the electric result, depending on whether the operations are of short duration or of long duration respectively.

Fast top burner speeds have real significance, because so many short time operations are conducted on the platform of a range that a series of minor delays amount to a very irksome total. Contrast the difference in time for the housewife to melt a little butter for mixing with other ingredients when she must start with a cold unit and with a bottled gas unit. It is commonly been said that approximately 80 per cent of all cooking operations are performed on the top burners.

Absorption Oil Studied Over Two-Year Period

(Continued from Page 30)

individual problems and by setting limits of their own, increase the usefulness of their absorption medium. The following tests are suggested by the authors for an oil used in batch renewal.

Specific gravity	0.825
Endpoint by distillation, °F.	600-620
Demulsibility, minutes (Kallam)	300-350
Gum, per cent (Gill)	15

When renewal during operation is practiced, oil of the following specifications is suggested.

Specific gravity	0 815
Endpoint by distillation, °F.	560-580
Demulsibility, minutes (Kallam)	200-250
Gum, per cent (Gill)	8-10

Gasoline Export Market Continues to Improve

(Continued from Page 23)

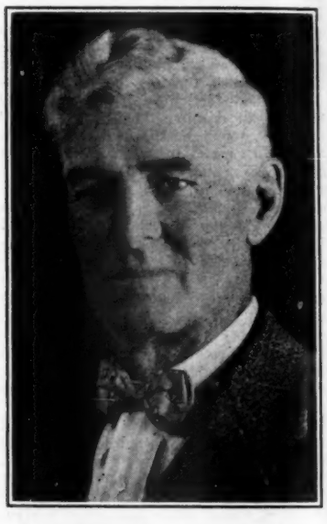
because of their antique equipment and operating methods, quality of products, distance from markets and lack of marketing facilities have no place in the competitive picture and it is doubted if the industry as a whole is willing to adopt a permanent policy of handing out what amounts to subsidies in the form of buying program in order to keep their operations legal. This, of course, has no application to refineries in and outside of East Texas whose operations are legal but which have accumulated gasoline in supporting the market of the past summer and now are in need of relief.

Prices

A check today of prices extending from gasoline to all grades of lubricants failed to reveal any important changes over last week in posted tank car and small barge quotations. Sellers generally refer to the movement of kerosene, furnace oils and heavy fuels as either "slow" or "fair." The textile strike has cost two or three refiners in this territory some of their industrial fuel oil business. Bright stocks and most grades of steam refined stocks are slow with a steady demand for low cold test neutrals.

Death Calls John Dwigans, Early Drilling Contractor

John W. Dwigans, 82, pioneer drilling contractor in the Pennsylvania oil fields, died Thursday, September 13, in his home in Tulsa. Mr. Dwigans started work as an oil field teamster at 18 in the Oil City,



JOHN W. DWIGANS

Pa., district. Shortly afterward he was employed as a tool dresser and then as a driller by Sam McGeehan, a drilling contractor. At 20 Mr. Dwigans, with a capital of $100, bought for $70 a discarded string of tools from Fisher Brothers, in Oil City, and became a drilling contractor.

Mr. Dwigans continued drilling in the oil fields of Venango and Butler Counties in Pennsylvania till 1887, when a shutdown movement stopped new operations and he went to work in the Eclipse plant of the Atlantic Refining Co., near Franklin, Pa. With resumption of drilling he took an active part in the development of the Washington and McDonald Fields. He worked on one well put down for Andrew W. Mellon.

In 1892, with his brother-in-law, George E. Kinnear, Mr. Dwigans engaged in contract drilling in Indiana and Ohio. In 1907 he returned to Pennsylvania, where he did contract drilling and acquired some producing wells. Seven years later he went to Oklahoma, doing contract drilling and in 1921 entering the service of the Twin State Oil Co. He remained with that company till last December, when failing health caused his retirement.

Mr. Dwigans resided with his only child, Miss Jetta Dwigans. His wife, who was Miss Susan Kinnear, died in 1925. He leaves a brother, Caleb V. Dwigans, and a sister, Miss Mabel Dwigans, both of Dallas City, Pa. His father, James Dwigans, an early oil operator, dropped dead on a derrick floor in Reno, Pa., when John was a young man.

Refiners Discuss Research Work at A.C.S. Meeting

(Continued from Page 8)

fact that the compression ratio of a mixture of two compounds is not always directly proportional to concentration. The present paper was concerned solely with individual hydrocarbons not in solution with gasoline.

In the paraffins increasing the length of the carbon chain abruptly increased the knocking tendency, while further increases in length resulted in appreciable but less abrupt changes in the knocking tendency. The influence of the more compact space arrangement of the carbon atoms is shown in the determination of a critical compression ratio of 2.8 for normal heptane and 13 for 2, 2, 4-trimethylbutane.

In the unsaturated aliphatic hydrocarbons the position of the double bond, the investigators reported, appears to be of considerable importance and the specific effect of the double bond appears to increase as its location is moved toward the center of the molecule. In the case of the heptynes, however, the effect appears to be the opposite. Centralization of two double bonds increases the compression ratio in the case of the hexadienes.

Five conclusions are drawn in the section devoted to naphthenes and aromatics: (1) The saturated cyclic hydrocarbons have distinctly greater knocking tendencies than the corresponding aromatic hydrocarbons; (2) the cyclohexane derivatives for the most part are comparable with commercial gasolines in knocking tendency; (3) although two or three double bonds within the ring exert a strong antiknock effect, a single double bond produces comparatively little effect; (4) increasing the length of the side chain increased the tendency to knock among both the aromatics and naphthenes; (5) branching of the side chain produced a decrease in knocking tendency among both naphthenes and aromatics.

Fractionation Apparatus

"Efficient Small Scale Fractionating Equipment," was the title of a paper presented by C. O. Tongberg, D. Quiggle and M. R. Fenske, of Pennsylvania State College. Pointing out that while small columns can be made more efficient than large ones, they usually lack the means of measuring and controlling the important operating variables, namely, rate of distillation and reflux ratio, the authors describe glass and metal fractionating columns in which these variables may be known at any time. The glass column measures 100 cm. in overall height, and 10 mm. inside diameter. The tube is packed 41 cm. with one turn glass helices. A test with binary mixture of n-heptane and toluene showed the column to have the equivalent of 11 to 12 perfect plates. The metal column is 2.74 meters in height and 33 mm. inside diameter. Two wire form packings have been tested, one having the shape of a staple leaving 72 per cent free space in 2.74 meters of packing, and one having a ring form, leaving 86 per cent free space in 2.74 meters of packing. The staple form packing when tested with a mixture of n-heptane and methylcyclohexane at total reflux was found to be equivalent to about 35 perfect plates, while the nickel wire helices, or rings, was equivalent to about 22 perfect plates.

K. M. Watson and Charles Wirth III, of Universal Oil Products, in a paper entitled "An Apparatus and Conversion Chart for Routine High Vacuum Distillation of Oils," described equipment developed to permit operation at pressures of approximately 0.1 mm. of mercury, and having the advantage of elimination of condensable vapors in the McLeod gauge to assure satisfactory accuracy of pressure measurements. Extensive use of ground glass connections allow a minimum of difficulty in manipulation and cleaning. A nonograph was devised by the investigators for accurately converting observed temperatures to normal boiling points. It is pointed out that the Coats and Brown chart for correlating and extrapolating vapor pressure data has the disadvantage of being difficult to read because of the wide range covered and the curvature of the pressure lines, and for that reason the new chart was derived from the Coats and Brown method to expedite routine conversions. Slight errors are introduced for extremely high or low boiling materials, but these errors are probably not greater than the error of the extrapolation to high temperatures in the original chart, the writers said.

Reports on Oils and Distillates

W. E. Kuhn and J. F. Collins, Jr., Texas Co., reported on an effort to obtain a definite means of determining the period of usefulness of an absorption oil in place of an arbitrary period of use based on general practice. This period was taken as the interval before excessive gum formation, etc., became evident. The tests used covered gravity, distillation, demulsibility, gum content and carbon residue. It was found the unusual conditions at the absorption or stripping systems were almost instantly revealed by the variations of the gum content. When the gum content of the absorption oil reached 18 to 20 per cent (Gill), the stripper showed heavy gummy, resinous deposits in the heater, exchangers and storage tanks. The deposits were mostly benzol soluble.

Ogden FitzSimons and E. W. Thiele, Standard Oil Co. (Indiana), presented a paper entitled "The Molecular Weight of Cracked Distillates." In a series of determinations by the cryoscopic method of the molecular weight of various cracked stocks from Mid-Continent gas oil and pressure still charging stocks, the investigators introduced several novel steps, and the molecular weight results are correlated with boiling point, viscosity and density.

Solvents used were benzene, cyclohexane and nitrobenzene. The drying agent is pulverized barium perchlorate which was found to be more satisfactory than sodium sulphate. When crystals appeared the solution was removed from the ice bath and warmed in the hand until melted and then returned to the ice bath. This procedure, repeated once or twice, improves the constancy of the freezing points, the authors said. Viscosities were determined on a set of three modified Ostwald viscosimeters, while densities were obtained with precision float hydrometers which were checked against a dilatometer.

W. B. McCluer and M. R. Fenske, Pennsylvania State College, discussed a method for evaluating the viscosity-temperature characteristics of oils. The presentation listed the following means for evaluating and comparing oils with respect to their relative rates of change of viscosity with temperature: (1) Ratio of the 100° F. viscosity to the 210° F. viscosity; (2) viscosity index as developed by Dean and Davis and later revised by Davis, Lapeyrouse and Dean; (3) viscosity slope number developed by Bell and Sharp by means of arbitrary arithmetic scales superimposed on the A.S.T.M. viscosity-temperature chart, D-341-32T; (4) viscosity gradient devised by Clayden for expressing the viscosity temperature slope of oils by means of angles and fundamental viscosity units; (5) viscosity-gravity constant introduced by Hill and Coates in 1928 as a means for evaluating the paraffinicity or naphthenicity of oils; (6) viscosity-gravity zones recommended by Larson and Schwaderer in 1932 and 1933 as a means for graphical estimation of relative viscosity-temperature characteristics, and (7) gravity index of McCluer and Fenske, based on an empirical relation between viscosity-gravity constant and viscosity index.

CANADIAN GASOLINE TAX

MURRAY BAY, Quebec, Sept. 15.—Addressing the annual meeting of the Canadian Good Roads Association here this week, W. G. Robertson, secretary-treasurer of the Canadian Automobile Association, forecasted the probability of the federal government imposing a tax on gasoline. Gasoline in Canada is at present taxed by provincial governments.

ROCKY MOUNTAIN FIELDS

Production estimates for week ended September 15, 1934, follow:

WYOMING	
Salt Creek	18,050
Big Muddy	1,800
Badger Basin	40
Black Mountain	400
Byron	390
Dallas Derby	510
Dutton Creek	70
Elk Basin	550
Ferris	20
Frannie	2,220
Garland	500
Grass Creek	1,040
Greybull	10
Hamilton Dome	1,210
Hudson	310
LaBarge	1,420
Lance Creek	340
Lost Soldier	1,430
Mule Creek	shut in
Midway	90
Notches	shut in
Oregon Basin	3,300
Osage	720
Pilot Butte	30
Rock River	1,480
South Casper	600
Poison Spider	230
Teapot	20
Total Wyoming	36,680
MONTANA	
Buckley-Border	270
Cat Creek	620
Cut Bank	3,380
Kevin-Sunburst	5,220
Lake Basin	40
Pondera	760
Total Montana	10,290
COLORADO	
Florence	230
Fort Collins and Wellington	530
Iles Dome	1,810
Moffat	470
Orchard	110
Rangely	90
Tow Creek	180
Total Colorado	3,420
NEW MEXICO	
Artesia	450
Cooper area	480
Empire area	100
Eunice area	2,630
Hobbs	33,960
Hogback	210
Hospah	shut in
Jal	2,930
Lea area	1,690
Jackson	1,600
Maljamar	290
Rattlesnake	780
Table Mesa	60
Total New Mexico	45,180
Total all fields	95,570
Total last week	96,900
Difference	1,330

East Central Texas Wildcats

(Continued from Page 40)

T. J. Wood et al's No. 3 New Birmingham Dev. Co., 660 ft. N and 330 ft. E of No. 1, Levi Jordan Sur.
Location.

Zilkey and McCulloch's No. 1 Bradford, 2,500 ft. from most southerly S line and 771 ft. from E line of survey, 4 miles E of Rusk, J. Armendaris Sur.
S.D. 3,930 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
Shut down.

FANNIN COUNTY

L. Kean et al's No. 1 L. M. Boyd, 900 ft. from E line and 200 ft. from N line of survey, W. Hunt Sur.
S.D. 2,497 ft.

FREESTONE COUNTY

Burris' No. 1 R. J. Johnson, NE cor. of a 95-5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Clyde Creighton's No. 1 Holly Bros., 354 ft. from W and center N and S lines of lease, A.B.&M. Sur.
Coring 5,820 ft.

Hailey-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

E. L. Smith et al's No. 1 Heimple, 450 ft. out of NE cor. A. G. Smith Sur., 4½ miles S of Dew.
Location.

J. E. Wilburn's No. 1 S. McShan, 4,000 ft. from NWL and 5,000 ft. from NEL of survey, G. Diaz Sur.
Shut down.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
S. D. 2,350 ft.

Cosden Oil Co.'s No. 1 Hunt & Miller, 990 ft. from N and 1,340 ft. from W lines of J. D. Hays Sur., 11 miles S of Chandler.
Rigged up.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, George Aldrick Sur.
S.D. 3,118 ft.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70a-c. tract, 1 mile SE of Miller Gros, A. Caro Sur.
S.D. 640 ft.

HUNT COUNTY

G. S. & S. Co.'s No. 1 O. Popper.
Coring 2,456 ft.

J. C. Hall's No. 1 Parrish, C of 100-ac. tract, N. Delaney Sur., 5 miles N of Lone Oak.
Derrick.

Long & Wolfe's No. 1 Aetna Life Ins. Co., 900 ft. W of Shawver's No. 1 Jones, 6½ miles NE Greenville.
Drlg. 21,99 ft.

L. G. Priest's No. 1 Amelia Barnett, 1,075 ft. from W line, 320 ft. from S line of J. C. Hamer Sur.
S.D. 1,355 ft.

J. E. Winans et al's No. 1 Phillips, 330 ft. from S and 960 ft. from W of 53-ac. tract in W. L. James Sur., 2 miles W of Commerce.
Rigging up.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
Drlg. 575 ft.

LAMAR COUNTY

Cole et al's (formerly Optometrist Oil Club) No. 1 J. M. McFaddin, 450 ft. from S and W lines of E 25-ac. tract, 10 miles NW of Paris, Joseph Dick Sur.
S.D. 2,506 ft.

LEON COUNTY

Kellough and Tucker's No. 1 G. B. Young, 330 ft. from S line and 330 ft. from W line of 100-ac. tract, 4 miles SE of Long Lake, J. M. Boone Sur.
Drlg. new hole 2,980 ft.

Normangee Corp.'s (W. C. Battaile et al) No. 1 B. H. Henry, 1,850 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 2½ miles NE of Normangee.
Spudded and S.D.

LIMESTONE COUNTY

Foster's No. 1 C. O. Wright, 200 ft. N of S line, 125 ft. W of E line of 2-ac. tract, 2 miles S of Wortham, Sarah McAnulty Sur.
T.D. 1,365 ft.,

Hall Edwards et al's No. 1 W. W. Simms, 330 ft. from S and E lines of 160-ac. tract, 8 miles E of Thornton, J. S. Chavert Sur.
S.D. 4,122 ft.

Peyton Bros. No. 1 Steubenrach, 370 ft. NW from SE line, 1,170 ft. SW of NE line of 346.39--ac. tract, P. Varela Sur.
S.D. 5,706 ft.

Schultz' No. 1 Roy Ward, NE cor. of 73.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.

Thompson et al's (formerly C. C. Curtis) No. 1 Emma Daniels, 150 ft. from S and W lines of 41.5-ac. tract, Pedro Varela Sur.
Drlg. 3,560 ft.

V. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Location.

MORRIS COUNTY

McGinnis et al's No. 1 Staggers, 800 ft. from S line of survey and 150 ft. from W line of lease, J. B. Nelson Sur.
T.D. 3,820 ft.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
S.D. 3,428 ft.

J. W. Rich et al's No. 1-A R. W. Hazlewood, 5,450 ft. from S line and 2,800 ft. from W line of survey, 50 ft. N of No. 1, 15 miles SW of Nacogdoches, Ewing Sur.
S.D. for surface csg.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,186 ft. to test.

R. B. Codding et al's No. 1 Lela Kelt, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield, C. B. Emmons Sur.
S.D. 1,546 ft.

W. J. Keeling et al's No. 1 J. F. Rushing, 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
Coring 2,835 ft.

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.

Wheelock and Collins' No. 1 I. N. Cerf, 375 ft. from N line of lease and 1,050 ft. from W line of lease, James Smith Sur. No. 726.
Pipe stuck 5,807 ft.

RAINES COUNTY

Wadley et al's No. 1 P. F. Jones; 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
T.D. 4,750 ft.

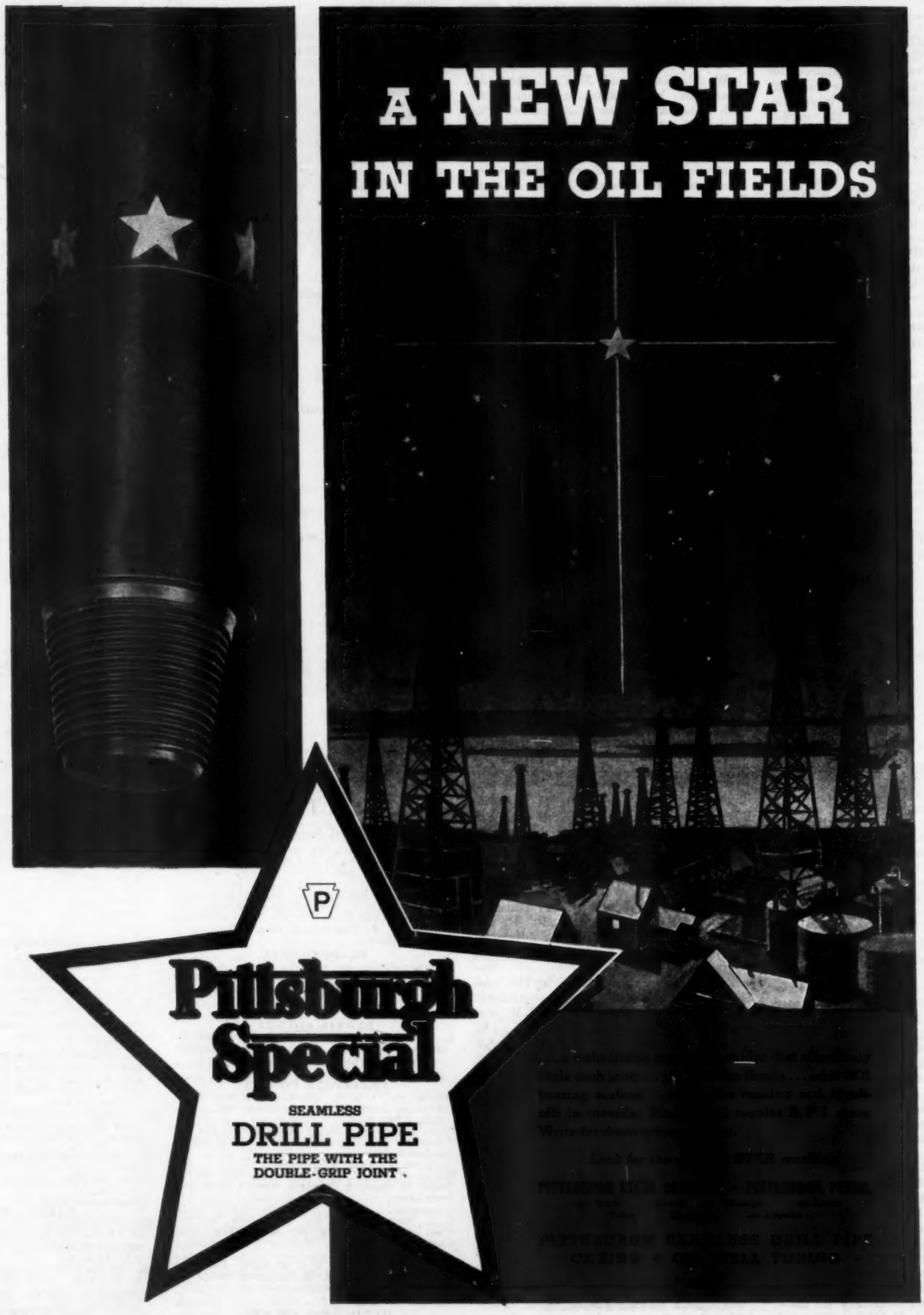
Rio Oil Co.'s No. 1 Johnson, 330 ft. N and W of 39 ac. tract, R. Hitchkiss Sur., 4½ miles E of Emory.
Drlg. 2,340 ft.

RED RIVER COUNTY

Cornell and Spear's No. 1 E. H. Thompson, 664 ft. from S and 1,062 ft. from W of NE cor. of 384-ac. tract, E. Smith Sur.
S.D. 1,072 ft.

RUSK COUNTY

Headwater Oil Co.'s No. 1 F. L. Gary, 375 ft. N of S line and center of E and W lines of 200-ac. tract, 8 miles E and S of Henderson, Jose A. Mora Sur.
S.D. 3,197 ft.; T.A.


A NEW STAR
IN THE OIL FIELDS
P
Pittsburgh
Special
SEAMLESS
DRILL PIPE
THE PIPE WITH THE
DOUBLE-GRIP JOINT

George Hudson et al's No. 3 Jeff Phillips. 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
T.D. 3,673 ft.
Kelly Harris' No. 1 T. W. Harris, 700 ft. from E line, 300 ft. from N line of N 80-ac. tract, 2½ miles SW of Henderson, Davis Sur.
S.D. 1,500 ft.

SMITH COUNTY

Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole, 1½ miles SE of Whitehouse. Washing to bottom.

UPSHUR COUNTY

Virgil Hodges et al's No. 1 J. M. Floyd, 330 ft. from NE cor. of 126-ac. tract, 4 miles N of Gladewater, Railroad Sur.
S.D. 3,745 ft.
Lanier and Moore's No. 1 Vaughan, 330 ft. from S line and 330 ft. from W line of 100-ac. tract, 2 miles NW of Big Sandy, P. W. Standifer Sur.
S.D. 1,042 ft.

VAN ZANDT COUNTY

Bridwell et al's No. 1 Sanger Bros., 150 ft. out of NW cor. of S 50 acres of E 100 acres of 200-ac. tract, John Walling Sur. Location.
W. E. Brown's No. 1 Bank of Edgewood, 660 varas from SW cor. of H. M. Lead Sur., M. B. Lout Sur.
S.D. 3,250 ft.
Van Zandt Synd.'s No. 1 C. S. Coker, 150 ft. out of SW cor. 55-ac. tract, William Daniel Sur.
S.D. 1,208 ft.
Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 4,260 ft.; fishing.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin. Location.
Hodges & Schwartz's No. 1 McKinsey, C of N and S lines and 150 ft. from W of 106-ac. tract, Wm. Daniels Sur.
Markin & Evens' No. 1 L. M. Palmer, 850 ft. E of W line and 150 ft. N of S line of 69.8-ac. tract, one-tenth mile E of Pruitt, Nacogdoches County School Land Sur.
S.D. 1,305 ft.
Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 610 ft.
Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,270 ft.
Pure Oil Co.'s No. 7 Shirley, 727 ft. S of N line, 225 ft. W of E line, Walling Sur. Coring 2,945 ft.
M. Rouch et al's No. 1 Bearden & Palmer, 150 ft. out of SE cor. of 61-ac. tract, Nacogdoches C.S.L.
S.D. 90 ft.

WOOD COUNTY

Alex Snyder et al's No. 1 T. Holmes, 200 ft. out of NE cor. of 122-ac. tract, 1½ miles SE of Hawkins, A. N. McKnight Sur. 399.
S.D. 4,807 ft.

West Texas Wildcats

(Continued from Page 39)

Skelly Oil Co.'s No. 5-A University, 660 ft. from N and 1,980 ft. from E, Sec. 1, Blk. 35, University Sur.
Drlg. 3,156 ft.
Stanolind Oil & Gas Co.'s No. 7, J. W. Cowden, 440 ft. from S line and 2,312 ft. from W line, Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur.
T.D. 4,245 ft.; shot; made 1,148 bbls. first 24 hours.
Stanolind Oil & Gas Co.'s No. 8 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 43, Twp. 1n.
S.D. 280 ft.
Stanolind Oil & Gas Co.'s No. 9 J. M. Cowden, 440 ft. from S line and 2,200 ft. from E line, Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur.
S.D. 3,963 ft.
Stanolind Oil & Gas Co.'s No. 4 E. F. Cowden, 1,900 ft. from S line and 660 ft. from W line, Sec. 36, Blk. 43, Twp. 2s, T.&P. Sur.
Drlg. 4,283 ft.
Sun Oil Co.'s No. 1 Wight, 2,200 ft. from S line, 440 ft. from W line, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,885 ft.
Fred Turner's No. 2-A Addis, 2,310 ft. from N and 440 ft. from E of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Derrick.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley.
Drlg. 1,205 ft.

FISHER COUNTY

Condor Pet. Co.'s No. 2 Wilson, 640 ft. from N and 2,310 ft. from W line of Sec. 6, Blk. R, W. E. Richardson Sur.
S.D. 3,226 ft.
Texas Co.'s No. 2 Daniels, 330 ft. from N and W. Sec. 194, Blk. 1, B.B.B.&C. Sur.
Drlg. 1,915 ft.
Texas Co.'s No. 2-B Teagarden, 990 ft. from S and 330 ft. E of NW cor. of S half of Sec. 9, Blk. 5, W. E. Richardson Sur.
T.P. 3,209 ft.; T.D. 3,219 ft.; treated.
Texas Co.'s No. 1 First National Bank of Rotan, 330 ft. N and E of the NW cor. of Sec. 210, B.B.B.&C. Sur.
T.D. 2,730 ft.; U.R. csg.

GLASSCOCK COUNTY

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Rigging rotary; T.D. 3,925 ft.

John I. Moore's No. 1 Hubbard, 660 ft. from E line, 660 ft. from S line, Sec. 16, Blk. 34, Twp. 5s, T.&P. Sur.
T.D. 3,245 ft.; plugging.
Simms Oil Co.'s No. 1 McDowell, 1,650 ft. from N line, 2,310 ft. from W line, Sec. 19, Blk. 33, Twp. 2s, T.&P. Sur.
T.D. 2,308 ft.; treated: now testing.

HOWARD COUNTY

California Oil Co.'s No. 1 Dodge, 1,915 ft. from E line and 465 ft. from S line of Sec. 1, Blk. 30, T.&P. Sur.
T.D. 2,860 ft.; testing.
Continental Oil Co.'s No. 11 Settles, 330 ft. from N line, 2,310 ft. from W line, Sec. 33, Blk. 29, W.&N.W. Sur.
Machine at 2,250 ft.
Eastland Oil Co.'s No. 2 Chalk, 2,310 ft. from S line, 990 ft. from W line, Sec. 125, Blk. 29, W.&N.W. Sur.
Drlg. 1,632 ft.
Fred Hyer et al's No. 1 Clay, 2,310 ft. from N and 330 ft. from E, Sec. 126, Blk. 29, W.&N.W. Sur.
Rigging up.
L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, Blk. 30, Twp. 1s, T.&P. Sur.
Derrick.
Illinois Oil Co.'s No. 1 Logan, 990 ft. from N line, 2,310 ft. from E line, Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 2,160 ft.; T.D. 1,885 ft.
Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 46, Blk. 30, Twp. 1n, T.&P. Sur.
T.D. 530 ft.; pulling csg.
Merrick & Lamb's No. 15 Clay, 990 ft. from E line, 2,310 ft. from S line, Sec. 126, Blk. 29, W.&N.W. Sur.
T.D. 1,900 ft.; pumping.
Phillips Pet. Co.'s No. 1 Davis, 990 ft. from E and 2,310 ft. from S line, Blk. 30, Twp. 1s, T.&P. Sur.
S.D. 2,405 ft.
Stogel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 29.
Spudded.

IRION COUNTY

Melrose Oil Co.'s No. 1 J. D. Sugg, 1,700 ft. from the E line and 308 ft. from the S line of Sec. 25, Blk. 2, H.&T.C. Sur.
Drlg. 270 ft.
Williams-Short's No. 1 Gentry, 2,200 ft. from N line and 2,080 ft. from W line of Sec. 1, Blk. 3, H.&T.C. Sur.
S.D. 1,450 ft.

JONES COUNTY

Capital Oil Co.'s No. 1 Young, 150 ft. S and 220 ft. E of W 33 acres of 84-acre tract, R. Smith Sur.
Spudded.
Clifton & Brazelton et al's No. 1 Cassey, 200 ft. from N and W lines of SE cor. of Sec. 15, Blk. 15, T.&P. Sur.
S.D. 850 ft.
Guthrie & Lancaster's No. 1-B Campbell, 330 ft. from N and 2,276 ft. from E line of Sec. 15, Blk. 19, T.&P. Sur.
S.D. 1,020 ft.
John Byram et al's No. 1 P. Jones, 200 ft. from S and 660 ft. from W of NW, Sec. 5, Blk. 15, T.&P. Sur.
Run csg. 1,337 ft.
Richards et al's No. 1 Ransom, 200 ft. from N and E, Sec. 244, B. M. Clopton Sur.
Spudded and S.D.
Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur.
Spudded.
Texas Inland Oil Co.'s No. 1 Boaz, 330 ft. from N and W of N 311 acres of S 611 acres, John Wall Sur. No. 272.
Drlg. 1,033 ft.

LOVING COUNTY

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur.
Drlg. 2,000 ft.
H. W. Martin's No. 4 Wheat, Ramsey, 990 ft. from SE and SW lines of Sec. 83, Blk. 1, W.&N.W. Sur.
T.D. 4,265 ft.; 4,000,000 ft. gas.
J. F. Slack's No. 1 Covey, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 3, Blk. 2, W.&N.W. Sur.
T.D. 4,260 ft.; plugged back 4,255 ft.; shot and swabbing.

PECOS COUNTY

Adams et al's No. 1 Schearer.
Location.
Adams et al's No. 1 Masterson.
Location.
California Oil Co.'s No. 24 Hates, 160 ft. from E line and 20 ft. from S line, Sec. 34, Blk. 194, G.C.&S.F. Sur.
S.D. 1,020 ft.
Cardinal Oil Co.'s No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-E, Sec. 40, Blk. 194, G.C.&S.F. Sur.
Testing water shutoff 1,343 ft.
Gulf Prod. Co.'s No. 2 White and Baker, 330 ft. from N and E of Sec. 42, Blk. 194, G.C.&S.F. Sur.
Cellar.
Humble Oil & Ref. Co.'s No. 2 White & Baker, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 4, Blk. 179, T.C.R.R. Sur.
Fishing 1,875 ft.
Illinois Oil Co.'s No. 2 University, 330 ft. from E line and 960 ft. from S line, Sec. 31, Blk. 24, University Land Sur.
S.D. 1,500 ft.
C. S. Messenger's No. 2 Rand Jones, 1,935 ft. from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
T.D. 1,651 ft.; shot; cleaning out.
Pecos Prod. Co.'s No. 1 Green & Ogden, 330 ft. from S and 159 ft. from W of vacancy strip on E side of Sec. 104, T.C. Sur.
Drlg. 1,030 ft.
Tex-Mex Pet. Co.'s No. 1 Netterville, 5,610 ft. from S and 330 ft. from W of Sec. 59, Blk. 8, H.&G.N. Sur.
Making 10 to 15 bbls. oil per day; T.D. 2,221 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
T.D. 1,152 ft.; running csg.

REAGAN COUNTY

E. P. Kirschner and White's No. 1 W. A. White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,223, E.L.R.R. Sur.
S.D. 3,165 ft.
Skelly Oil Co. et al's No. 1-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 8, University Land Sur.
Moving in rotary.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
T.D. 885 ft.; moving in rotary.
Grisham & Hunter Corp.'s No. 1-A fee, 1,320 ft. from N line and 1,470 ft. from E line, Sec. 1, Blk. 50, Twp. 8, T.&P. Sur.
T.D. 5,212 ft.; show oil 5,196-5,212 ft.; to set pipe.
Hugo Freels' No. 1 B. Greenman, 330 ft. from NE line and 231 ft. from SE line of Sec. 21, Blk. 2, H.&G.N. Sur.
T.D. 3,985 ft.

RUNNELS COUNTY

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 320 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 532.
Drlg. 2,179 ft.
Hall Oil Co.'s No. 1 Brevard, 160 ft. N and W in Subdiv. 21, D. Diaz Sur.
Material.
Daniel et al's No. 1 W. F. James, 330 ft. from N and W lines of Subdiv. No. 20, Norvell Travis Sur.
S.D. 1,410 ft.
Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100.
S.D. 1,429 ft.; to run csg.
R. Wells' No. 1 James, 396 from N and 820 ft. from E of James tract in Sec. 16, D. Diaz Sur.
Spudded.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
Running 5 3/16-inch csg.
Humble Oil & Ref. Co.'s No. 1 Ike Honig, 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
Drlg. 2,836 ft.

SUTTON COUNTY

Texas & Hesselman's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.& N.G. Sur.
Location.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.

UPTON COUNTY

Broderick & Calvert's No. 1 Homer Trust & Savings Bank, 1,980 ft. from N line, 660 ft. from W line, Sec. 22, Blk. B-42, Twp. 4s, T.&P. Sur.
Drlg. 4,120 ft.
Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Drlg. 10,753 ft.
Perry & Breeding's No. 1 Lane, 1,650 ft. from S line and 990 ft. from E line of Sec. 36, Blk. 1, M.K.&T. Sur.
Drlg. 2,148 ft.
Stanolind Oil & Gas Co.'s No. 33 Burleson, 1,650 ft. from N line, 1,650 ft. from E line, Sec. 2, Nidever Sur.
Derrick.
Theabotal Oil Co.'s No. 2 J. F. Lane, 1,650 ft. from N and 990 ft. from E of Sec. 36, Blk. 1, M.K.&T. Sur.
S.D. 2,265 ft.
Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
Drlg. by tools 2,037 ft.

VAL VERDE COUNTY

South-Western Exploration Co.'s No. 1 E. K. Fawcett, 2,310 ft. from S and 2,310 ft. from E, Sec. 14, Blk. L, G.C.&S.F. Sur.
Rig up.

WARD COUNTY

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.
Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, H.&T.C. Sur.
Shut down.
California Oil Co.'s No. 10 Durgin, 2,310 ft. from SE line, 330 ft. from SW lines, Sec. 15, Blk. 34, H.&T.C. Sur.
Drlg. 2,385 ft.
C. C. Duffey et al's No. 1 Llano-Sloan, 1,650 ft. from NW and NE lines of Sec. 24, H.&T.C. Sur.
T.D. 3,178 ft.; P.B. 2,725 ft.; testing.
Eppenauer Drlg. Co.'s No. 1-B Combs, 433 ft. from SE and 1,826 ft. from SW, Blk. 4, J. W. Hollingsworth Sur.
Drlg. 2,410 ft.; 1,000 ft. oil in hole.
Gulf Prod. Co.'s No. 32 Hutchins, 990 ft. from N line, 990 ft. from W line, Sec. 4, Blk. F, G.&M.M.B.&A. Sur.
Drlg. 2,642 ft.; oil 2,599 ft.
Gulf Prod. Co.'s No. 50 O'Brien, 990 ft. from E line, 330 ft. from S line, Sec. 17, Blk. F, G.M.M.B.&A. Sur.
Drlg. 2,765 ft.
Plains Prod. Co.'s No. 1 J. J. McGregor, 660 ft. from SE line, 660 ft. from SW line, Sec. 169, Blk. 34, H.&T.C. Sur.
S.D. 200 ft.
Postellio & Caprito's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
Rig up and S.D.
Sid Richardson's No. 4-B W. D. Johnson, 990 ft. from NE line, 330 ft. from SE line, Sec. 32, Blk. 34, H.&T.C. Sur.
Drlg. 2,540 ft.; oil 2,338 ft.
Rogers & Graham's No. 1 J. C. Wells, 330 ft. from SE and 603 ft. from SW, Sec. 19, Blk. 34, H.&T.C. Sur.
Drlg. 2,405 ft.
Sageland Oil Corp.'s No. 2 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.
Tex-Mex Pet. Corp. et al's No. 3 Llano-Owens, 1,650 ft. from NW line and 2,310 ft. from SW line, Sec. 16, Blk. 5, H.&T.C. Sur.
Drlg. 2,825 ft.; oil 2,682 ft.

WINKLER COUNTY

Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 2, Blk. 77, P.S.L. Sur.
Location.
Magnolia Pet. Co.'s No. 6 Scarborough, 1,650 ft. from S line and 330 ft. from W line of Sec. 4, Blk. 22-C, P.S.L. Sur.
T.D. 3,074 ft.; cleaning out.
Magnolia Pet. Co.'s No. 7 Scarborough, 1,650 ft. from N line and 990 ft. from E line of Sec. 18, Blk. 7, P.S.L. Sur.
Drlg. by tools 2,980 ft.
R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line, Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 110 ft.
Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 13, Blk. B-11, P.S.L. Sur.
Drlg. 1,510 ft.
Sid Richardson's No. 2-B Tidal-Scarborough, 1,005 ft. from S line, 990 ft. from W line, Sec. 4, Blk. C-22, P.S.L. Sur.
S.D. 2,568 ft.
Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 22-C, P.S.L. Sur.
Machine.
Sayre Oil Co.'s No. 1 Howe, Sec. 12, Blk. 26, P.S.L. Sur.
S.D. 2,680 ft.
Skelly Oil Co.'s No. 1 Hailey, Sec. 25, Blk. B-11, P.S.L. Sur.
T.D. 3,112 ft.; T.P. 3,105 ft.; 382 bbls. in 16 hours.

Texas Panhandle Wildcats

Week Ending September 15

CARSON COUNTY

Empire Gas & Fuel Co.'s No. 1 C. S. Seiber, 1,326 ft. from E line, 330 ft. from S line of SE Sec. 10, Blk. 7, I.&G.N. Sur.
T.P. 3,220 ft.; T.D. 3,239 ft.; flowing.
Stanolind O. & G. Co.'s No. 2 L. C. McConnell, 330 ft. from N line, 330 ft. from W line, E½ SW Sec. 187, Blk. 3, I.&G.N. Sur.
Fishing 3,065 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, C N½ Sec. 79, Blk. 5, I.&G.N. Sur.
Rig.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9.
Drlg. 4,570 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarbie, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
S.D. 3,200 ft.

GRAY COUNTY

Dixon Creek Oil Co.'s No. 1 Benedict, 330 ft. from S and 330 ft. from W, Sec. 114, Blk. 3, I.&G.N. Sur.
Drlg. 3,105 ft.
Niapa Oil Corp.'s No. 1 Cole, 330 ft. from S and 330 ft. from W, Sec. 104, Blk. 3, I.&G.N. Sur.
T.D. 3,321 ft.; plugged back to 3,200 ft.
Southwest Prod. Co.'s No. 1 T. Cobb, 1,320 ft. from S line, 990 ft. from E line, NE Sec. 134, Blk. 3, I.&G.N. Sur.
S.D. 2,680 ft.
Texwell Oil Co.'s No. 1 J. C. McConnell, 330 ft. from S line, 330 ft. from W line, SW SW Sec. 174, Blk. 3, I.&G.N. Sur.
S.D. 3,267 ft.

HUTCHINSON COUNTY

Brownie Oil Co.'s No. 1 Ware, 330 ft. from N and 330 ft. from W, Sec. 124, Blk. 4, I.&G.N. Sur.
Set csg.; T.D. 1,132 ft.
Huey et al's No. 1 Christian, 220 ft. from S and 330 ft. from W, Sec. 33, Blk. Y, A.&E. Sur.
Drlg. 440 ft.
Phillips Pet. Co.'s No. 3 A. Yake, 7,553 ft. from N line, 330 ft. from W line, Sec. 36, H.&T.C. Sur., Blk. 47.
T.P. 2,890 ft.; T.D. 2,922 ft.; treated.
Stanolind O. & G. Co.'s No. 4 C. Ware, 330 ft. from N line, 1,650 ft. from W line, Sec. 20, Blk. M-21, T.C.R.R. Sur.
Drlg. 2,000 ft.

KNOX COUNTY

C. C. Christie's No. 1 Moore, Sec. 37, Blk. 45, H.&T.C. Sur.
Location.
Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
Drlg. 6,092 ft.
Sunray Oil Co.'s No. 2-A Jones, 330 ft. S and W lines Sec. 164, Blk. 3-T, T.&N.O. Sur.
Rig.

WHEELER COUNTY

Bowers & Carvers' No. 1 L. B. Sims, 330 ft. from N line, 330 ft. from E line of SW Sec. 60, Blk. 17, H.&G.N. Sur.
Drlg. 2,095 ft.
Carver Drilling Co.'s No. 1 Rock Island, 1,600 ft. from S line, 2,310 ft. from W line, Sec. 47, Blk. 13, H.&T.C. Sur.
Cellar.
Christie-Hickman's No. 1 Walker, 330 ft. S and E of NE Sec. 49, Blk. 24, H.&G.N. Sur.
Material.
Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft., from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
Drlg. 2,585 ft.

Ben G. Barnett's No. 1 Boren, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
S.D. 1,010 ft.
LeFors Pet. Corp.'s No. 1 Perkins, 330 ft. from S line, 330 ft. from W line, Sec. 54, Blk. 24, H.&G.N. Sur.
Rig up.
Myers & Kennedy's No. 1 Harvey, 660 ft. from S and E line of NW Sec. 67, Blk. 13, H.&G.N. Sur.
T.D. 2,235 ft.; to plug back.
Piney O. & G. Co.'s No. 1 Rippey, C NE Sec. 123, Blk. 23, H.&G.N. Sur.
Drlg. 1,842 ft.
Reno Oil Co.'s No. 1 Mankins, SW SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
Ran csg. 2,095 ft.
Smith Bros.' No. 1 Williams, 330 ft. N and E, W½ SE Sec. 49, Blk. 24, H.&G.N. Sur. Location.
Smith Bros. No. 1 A. Plummer, 330 ft. from N line, 330 ft. from E line, N½ SW Sec. 45, Blk. 24, H.&G.N. Sur.
T.D. 2,547 ft.; P.B. 2,532 ft. to shut off water.

Southwest Texas Wildcats

(Continued from Page 36)

No. 3 in Jose Marcelio, Hino Josa grant.
Drlg. 2,933 ft.
W. C. McBride's No. 1 Hagist, 330 ft. from N and E lines of SE 80 ac. of Sec. 1.
Drlg. 2,606 ft.
O'Byrne & Jennings' No. 1 Benavides, 3,734 ft. from S cor. and 330 ft. from W line at right angles, Sur 355
S.D. for wtr. 2,299 ft.
Sun Oil Co.'s No. 1 Moreno, 330 ft. from E line and 2,000 ft. from S line of NW cor of H.&W. Sur. 537, in Sec. 540 (5 mi. S of San Diego).
Abnd. 6,902 ft.
Texas Co.'s No. 1 Beall Graham, about 12 miles N of San Diego, in Sur. 571.
Abd. 3,425 ft.; shale.
Washington Texas G. & O. Co.'s No. 1 Rita S. de Pena O. & G. Co., 3,500 ft. SW line, 1,000 ft. NW line of Penna tract, Share 4, L. Mesquite grant.
Fishing 2,250 ft.

EDWARDS COUNTY

Ohlhausen et al's No. 1-A Turney, C.C.S.D. &R.G.N.G. Sur., 1,630 ft. N line, 330 ft. W line, Sec. 176 ft.
Junked hole 275 ft.
Will Olhausen's No. 1-B Turney, 660 ft. from W line, 1,622 ft. from N line of Sec. 176 C.C.S.D.&R.G.N.G. Sur.
Drlg. 315 ft.
H. H. Sides' No. 1 Turney, C.C.S.D.&R.G.N.G. Sur. No. 164, 1,320 ft. N line and W line of survey.
S.D. 1,012 ft.

FALLS COUNTY

Dorris et al's No. 3 C. E. Greater, G. Basque Sur.
No report.

FAYETTE COUNTY

Magnolia Pet. Co.'s No. 1 Steinman Almansure Sur., 330 ft. N line and E line of most southerly cor. of 90-ac. tract.
Drlg. shale 1,863 ft.
Richardson et al's No. 1 Anderson, 656 ft. E of cen. of W line of lease, James Winn Sur., one-quarter mile NW Round op.
Sand 2,695-97 ft., gas and S.W.; T.D. 2,825 ft.; S.D.
J. P. White's No. 1 Wing, 200 ft. from N line, 4,100 ft. from E line of 1,200-acre tract in B. Osborne Sur.
T.D. 750 ft.; S.D.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 800 ft. (4 mi. SW of Pearsall).
Drlg. lime 3,486 ft.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41, or 6 ft. S of No. 1.
No report.

GOLIAD COUNTY

Duval Oil Corp.'s No. 1 Lucy Borden, 330 ft NE cor. of 124-ac. tract in Alberto Guitterez Sur., 1¼ miles W of Charco.
Drlg. shale 4,209 ft.
Oceanic Pet. Co.'s No. 1 Fromme, 1,500 ft S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur. 10 miles N of Goliad.
T.D. 2,865 ft.; 3-min. D.S. test recovered 5 fourbles mud and oil; derrick down.

GONZALES COUNTY

Weinert et al's No. 1 A. Kailles, 3,340 ft. S line and same N of river and 150 ft. E line of tract, Ira Nash Sur.
Spudded.

GUADALUPE COUNTY

J. E. Clark's No. 1 Roughgarden, J. O. Blair Sur., 800 ft. SE line, 150 ft. NE line of tract.
S.D. 2,350 ft.
Diamond Half Oil Co.'s No. 1 Wm. Maiserhofer, 506 ft. from E line and 1,500 ft. from N line of 51.85-ac. tract in L. H. Peters Sur.
Rig.
J. Elmer Thomas et al's No. 1 A. J. Mauermann, 5,350 ft. from W line and 33,300 ft from S line of Joseph DeLabaume Sur.
Abd. 3,529 ft.
L. E. Trout's No. 1 McKee, Green DeWitt Sur., SW Darst Creek.
Spudded.

HIDALGO COUNTY

Davis & Harrison's No. 1 Lula George, 300 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa.
Fishing swab.
T.D. 4,135 ft.; hole full salt water; to deepen to 4,500 ft.
Rogers et al's No. 1 Fairbanks, 7 miles S of McAllen.
T.D. 310 ft.; S.D.
Otto Woods' No. 1 John Lawrence, 530 ft from W, 300 ft. from N line of Tract 274 Porcion 39, Ancient Jurdiction of Reynosa.
Sand 2,735-53 ft.; swabbing.
Union Sulphur Co.'s No. 3 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 86, North Capisallo district.
Drlg. sand and shale 5,280 ft.

JIM HOGG COUNTY

John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
Rig.
Sun Oil Co.'s No. 2-E Guerra, Los Cuevitas Sur.
Coring 2,899 ft.
Sun Oil Co.'s No. 2 Martinez, 2,640 ft. from N line, 600 ft. from W line of Sur. 221.
T.D. 1,870 ft.; drlg.

JIM WELLS COUNTY

John F. Camp's No. 1 B. W. Owens, 900 ft. from NE cor. of Sec. 11, 2 mi. E of Alfred.
T.D. 500 ft.; waiting on rig.
O. W. Killam's No. 1 Wade, 100 ft. NE line and 1,400 ft. NW line of Lot No. 1, Blk. C, Wade Subd.
Abd. 5,606 ft.
Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 330 ft. from S and W lines of H.T.&B. Sur. No. 7, 2½ miles W from Alfred.
Rig standing.
Smith & Storey's No. 1 Martha E. Ellsworth, 330 ft. N and W from SE cor. of W half of W 426 acres of Stanley Welch Sur.
Drlg. 700 ft.

KARNES COUNTY

Bryce McCandless' No. 1 Beeville Nat. Bank, 330 ft. from N and W lines of tract, G. B. Meyers Sur., 2,600 ft. E of Diamond Half well.
Derrick.
R. E. Caveaux et al's No. 1 Tom Campbell 330 ft. S and E cor. of farm and survey, J. R. Backer Sur., 12¾ miles SW of Falls City.
Spud and S.D.
Harrison Oil Co.'s No. 1 Martin Schaefer 330 ft. from SW line, 1,200 ft. from SE line of L.P.L.A.&M. Sur.
Coring 2,705 ft.

KENDALL COUNTY

Walter Bradley's No. 1 Werner, John F. Torrey Sur.
Drlg. 865 ft.
W. R. Shanklin's No. 1 Seidenstick, 1,825 ft. from most easterly E line, 100 ft. from most northerly S line of Antonio Rodeguez Chacon Sur. 257.
T.D. 400 ft.; S.D. for csg.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur.
T.D. 675 ft.; S.D.
Herbert Oil Co.'s No. 1 J. D. Witt, 13,200 ft. from N line, 1,200 ft. from W line of Sec. 1,925, Hamilton Sur.
Set 15½-in. csg. 110 ft., 12½-in. csg. 962 ft.; T.D. 1,896 ft.; S.D.
Jeff Love and Eastland Oil Co.'s No. 5-E Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
Drlg. 2,710 ft.
J. F. Morrissey et al's No. 1 F. A. Karge, 1,400 ft. from S line and 600 ft. from E line of survey, Sec. 1, B.S.&F. Sur.
T.D. 820 ft.; water.
G. F. Schreiner's No. 3 Jeff Love, 1,444 ft. from W line, 1,194 ft. from S line of Sur., 660 ft. N and 100 ft. E of Evans & Gants' No. 1 Love, Martinez Sur. 1,594.
Location.

KLEBERG COUNTY

J. S. Brown's No. 1 Antone Dietz, Sec. 7, Hotch estate.
S.D. 2,350 ft.
H. Clark et al's No. 1 Kivlin, Sec. 39.
T.D. 2,331 ft.; S.D.
Ryalls & Bartlett's No. 1 Flats, Sec. 40.
S.D. 985 ft.

LaSALLE COUNTY

Dupree Fountain's No. 1 R. J. Kroschewsky, 1,000 ft. from N line, 150 ft. from E line, in A. G. Starty Sur.
Rig up and S.D.
Standard Oil Co. of D. C.'s No. 1 J. M. Martin, 300 ft. S and W lines of 543-ac. farm in Sur. 683.
Drlg. 868 ft.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, David Hudson Sur.
T.D. 6,250 ft.; showing oil in Buda lime.
H. A. Sherlack's No. 1 Otto, 736 ft. from NW line, 1,310 ft. from NE line of 57.5-ac. tract in Thomas Morrow Sur.
T.D. 1,497 ft.

LIVE OAK COUNTY

J. H. Durbin's No. 3 Marbach, 1,850 ft. from W line and 450 ft. from S line of 428-ac. tract in Stephen Hays Sur.
Spudded.
W. H. Heimerich's No. 1 Cartwright, 660 ft. from W line, 330 ft. from S line of Lot 16, Seale, Morris & Seale Sur.
Location.
Henderson Coquat's No. 1 Jacob, 660 ft. from N and E lines of Tract 27, Charles E. Trapp Subd., of Everett & Henry Sur.
Drlg. 646 ft.
Marine Corp.'s No. 1 Ross Booth, 400 ft. from SE line and SW line of 392.7-ac. tract in M. B. Kivlin Sur., E of Lucas Field.
No report.
Unit Oil Co.'s No. 2 Terrell, 1 mile NE of No. 1.
Set surface csg.

MAVERICK COUNTY

Stroman & Wright's No. 2 Debona, 440 varas E line, 330 varas S line of Sur. No. 1.
T.D. 855 ft.; S.D.

McMULLEN COUNTY

Boling's No. 1 Brown, 1,500-ac., NW Crowther field.
Location. Contract calls for 1,000 ft. test.
Brasada Oil Co.'s No. 1 Nueces Land & Livestock Prop., in C SE Sec. 111 and about 4 miles W of the Cooper & Frates No. 1 Hagist.
Drlg. sand 1,424 ft.
Choate & Noble's No. 1 Miles, 330 ft. from S line, 2,750 ft. from E line of 1,250-ac. tract in Stephens Sur.
Location.
Cooper & Frates' No. 1 Hagist, 330 ft. out of the NE cor. Sec. 125, and just W of No. 3 Hagist of Lefevre & Spice.
Pettus sand 2,190-2,200 ft.; S.W.; W.O.
Don Long's No. 1 Nueces Land & Livestock Co., Sec. 111.
Rigging up.
C. C. Shumway's No. 8 Hagist.
Preparing location.
Hy Younc's No. 1 Callihan, NW cor. Blk. 4, Sec. 6, James Gardner Sur.
Derrick.
Charles Wuest's No. 1 Fisher, Roderick O'Boyle Sur.
Moving in.
Hy Yound's No. 1 Callihan, James Gardner Sur., NW cor. Blk. 4, Sec. 6.
Derrick.

MILAM COUNTY

McNeill Pet. Co.'s No. 1 W. C. Butler, 450 ft. NW line, 1,050 ft. NE line, Butler 100-ac. tract, James Lewis Sur.
Drlg. shale 752 ft.
Scoggins & Benders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 395.
Drlg. Glenrose lime 1,697 ft.

MENARD COUNTY

Duffey-Chedster's No. 1 Mears Wilkinson, 660 ft. S line and 660 ft. W line of T.&N.O. Sur., Sec. 23, Abstract 754.
T.D. 100 ft.; S.D.

NUECES COUNTY

Beaudoin & Daily's No. 1 Knox, 1½ mi. NE Corrigan.
Derrick.
Buff Pet. Co.'s No. 1 Vincent Bluntzer, 660 ft. N line, 660 ft. E line of Share 7 of Bluntzer Subd.
Rigging.
Clymore Oil Co.'s No. 1 Palo Alto Farms, 2,640 ft. from N and E lines of Sec. 182 of Bishop Subd.
Location.
Stanolind Oil & G. Co.'s No. 2 Stratton, 1,980 ft. from N line, 660 ft. from W line of Nl Sec. 13, DeAbaio grant.
Drlg. shale 6,635 ft.
Texon Royalty Co.'s No. 1 Robert Driscoll, 330 ft. from N line, 5,697 ft. from W line of 880-ac. Driscoll tract and E of Simmons & Perry tract.
Rig up.
Texon Royalty Co.'s No. 1 W. W. Walton, 330 ft. from N and W lines of 166 2/3-ac. tract in Lot No. 5.
Derrick.

REAL COUNTY

C. J. Heartwell et al's No. 2 L. J. Baby 694 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 3,000 ft.; prep. to set 8-in. csg.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 220 ft. N of SW cor. of the North B. Giddings Sur. on a 1,000-ac. tract.
Spudded.
Gum Hollow Oil Co.'s No. 1 J. G. Willacy, 2 mi. W Portland.
Location.
Heep Oil Corp's No. 2 R. Welder, 466 ft. from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur.
Location.
Heep Oil Corp.'s No. 4 R. Welder, 466 ft. S and W lines 300-ac. tract, Victor Loupsey Sur.
Drlg. shale 5,325 ft.
Petrol Corp.'s No. 1 R. H. Welder, 467 ft from S and E lines of 300-ac. tract
T.D. 6,028 ft.; P.B. to 5,200 ft.; cmtd. csg.; D.S. test recovered 80 ft. oil and 40 ft. mud, 600 lbs. pressure in 10 min.

STARR COUNTY

Cooper & Andrews' No. 1 J. M. Martinez, SW cor. Sec. 135.
Location.
C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 1 (NE part of county).
Coring 1,080 ft.
C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drlg. water well.
R. S. Boling and Dean Bros.' No. 1 M. M. Garcia, 2,150 ft. from S line, 4,600 ft. from W line of Sur. No. 918.
Abd. 2,608 ft.
H. C. Harter's No. 1 Sanches et al, 530 ft from N line and 450 ft. from W line of Share 72, Porcion 72.
Shale 260 ft.; S.D.
Jeffries-Lambeth Drlg. Co.'s No. 2 Starr County Cattle Co., N of No. 1 in Share 40, Porcion 89.
Flowing 40 bbls. daily.
R. M. Mitchell's No. 1 Kelsey Bass, 150 ft. from N line, 1,150 ft. from E line, Share 5, Por. 75.
Location.
R. M. Mitchell's No. 1 Seabury, 4,000 ft. from N line, 150 ft. from E line of Share 5, Por. 75, Camargo.
Location.
Smith-Tex Oil Co.'s No. 2 Starr County Cattle Co., 150 ft. out of NW cor. of E ½ of Blk. 37, Porcion 89.
No report.
Smith & Weston's No. 1 M. M. Garcia, Blk. 9, Sur. 908.
Location.
Sun Oil Co.'s No. 1 Gonzales & Clark, 600 ft. out of NW cor. of NE Sec. 372, T.T. Ry. Sur. No. A-773.
Location.
E. L. Younkin's No. 1 Kelsey Bass, 330 ft from S line, 7 ft. from W line of Blk. 19 in Porcion 87.
S. D. 1,750 ft.

TRAVIS COUNTY

Humble O. & R. Co.'s No. 1 C. J. Peterson, J. P. Kemp Sur., 330 ft. NE line, 990 ft. SE line of 126-ac. tract.
T.D. 746 ft.; cmtd. csg.
Marts & Beavens' No. 1 Emil Bloomquist, 150 ft. from NW line and SW line of 99½-ac. tract in Peter C. Harrison Sur.
Spudded.
Marts & Beavens' No. 1 John Olson, 1,000 ft. from NE line, 150 ft. from NW line of 39-ac. tract in Peter Harrison Sur.
Abd. 1,085 ft.

UVALDE COUNTY

Evans & Johnson's No. 1 Farris J. Hammons Sur.
Abd. 1,050 ft.
Lon Evans' No. 1 Stone, 2,566 ft. from N line and 1,473 ft. from E line of survey, 8½ miles NE of Uvalde, Kent. Sur. No. 652.
Abd. 130 ft.
Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur (3 mi. NE of Uvalde).
Drlg. shale 3,792 ft.
T. T. Word et al's No. 1 Quinn Brodea, 1,000 ft. S line and 350 ft. W line of John Young Sur. No. 897.
Abd. 1,200 ft.
T. T. Word's No. 1-B Truelove, 45 ft. E of No. 1-A.
T.D. 475 ft.; drlg.

WEBB COUNTY

W. P. Morris' No. 1 A. M. Brunt, 994 ft. NW line, 943 ft. NE line, Blk. 65, G. M. Brown Subd, Saltea pasture, in J. V. Borrego grant.
Drlg. shale 814 ft.
J. Elmer Thomas' No. 1 Gates, 1,080 ft. E line, 800 ft. from S line of Sur. 64.
Drlg. shale 750 ft.
Fidelity Exploration Co.'s No. 1 Soldivar, 1,300 ft. from E line, 2,600 ft. from N line of Sur. 657.
No report.
Wolcott et al's No. 1 D. Green, 1,865 ft. from W line and 1,552 ft. from N line of Sur. No. 282.
T.D. 450 ft.; S.D.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 14, Blk 30, Santa Rosa Subd., Share 44.
No report.

WILLIAMSON COUNTY

Johnson & Rag's No. 1 M. D. Oxford, 964 ft. N line of Glenn 209-ac. tract, 1,329 ft. from Shelby 320-ac. tract in 100-ac. tract, Williams Sur.
S.D. 920 ft.
Mann & Roez et al's No. 1 F. Roez, John Bevil Sur. 56.
S.D. 610 ft.
J. A. Morgan Russell's No. 1 Nelson Est., 150 ft. S line and 1,115 ft. E line of J. L. Justin No. 2 Sur., 5 miles S of Georgetown.
T.D. 375 ft.; tested some oil.

WILSON COUNTY

Ben M. Burger, trustee's No. 1 Burney, 310 ft. from W line, 150 ft. from S line of 14-ac. tract in Arocha grant, one-half mi. S Floresville.
Spudded and S.D.
Ben M. Burger, trustee's No. 1 J. A. Darling, 300 ft. from E line, 473 ft. from S line of 26½-ac. tract in Arocha grant.
T.D. 680 ft.; moving in rig to deepen old well.
Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostelle Sur. No. 9.
Rig.
J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 500 ft.; drlg. shale, previously reported aabndoned.

ZAPATA COUNTY

C. C. Crews' No. 1 M. D. Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Mission Oil Co. Subd. of Slator ranch, Borrego grant.
T.D. 1,739 ft.; std.
Danvers & Harrison's No. 1 M. J. Vela, 666 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd.
S.D. 1,632 ft.
P. G. Delaney et al's No. 1 Boipe et al, 330 ft. from N cor. of Blk. 1, Share 1, of Delaney Subd., Portion 32.
No report.
J. W. Edwards' No. 1 D. A. McAskill, 150 ft. from N and E lines of Blk. 62, J. W. Edwards Subd. of 4,069.6-ac. tract out of Corralits Subd. of the J. V. Borrego grant.
Derrick.
Merle Gunby's No. 2 Alice D. Haynes, 2,440 ft. SW line, 200 ft. SE line, Blk. 57, Haynes Subd., Comitas and Villa grants.
Drlg. 361 ft.
H. & M. Drlg. Co.'s No. 1 Slater, 614 ft. from SW line, 150 ft. from SE line, Blk. 65, J. B. Barrego grant.
Spudded.
R. V. & W. Oil Co.'s No. 1 Cuellar.
T.D. 1,125 ft.; moving in heavier rig.
Howell Muckelroy's No. 1 Filemn Flores, 77 ft. from SE line on NE line Lot 2, Blk. 30, Por. 37.
Derrick.
Joe Palmer's No. 11 S. Vela, 330 ft. from NE and SE lines of Blk. 170, Share 4 of L. Grillo grant (3 mi. E of Redondo Pool)
S.D. 900 ft.
R. & M. Drlg. Co.'s No. 1 M. D. Slator, Blk 65, of Mission Oil Co. Subd. in J. W. Borrego grant.
Rig.
E. P. Wells' No. 1 S. E. Garcia, 150 ft. from N and E lines of 200-ac. tract in Pedernal grant.
Moving in rig.

Southwest Texas Proven

Week Ending September 15

NORTH DALE POOL—BASTROP COUNTY

Joe E. Mills et al's No. 1 Wm. Litton, 620 ft. from SE line, 850 ft. from SW line

of 320-ac. tract in Navarro Sur.
Derrick.
Ogden & Reed's No. 1 Ed Pendergrass, 300 ft. from most northerly NW line, 500 ft. from most northerly SW line, A. J. Denson Sur.
S.D. 1,782 ft.
Watt L. Saunders' No. 1 Harris, 1,100 ft. from SW line, 2,830 ft. from NW line of John Maximilian Sur. No. 32
Top Austin 2,149 ft.; T.D. 2,338 ft.; no report.

CAESAR—BEE COUNTY

R. A. David's No. 1 Baptist Church, center of 3-ac. church lot, F. Lewis Sur.
Derrick.
Falvey et al's No. 1 Gardner, 330 ft. out of NE cor. of Gardner tract.
S.W. sand 3,053-64 ft.; standing.

NORTH PETTUS FIELD — BEE, GOLIAD AND KARNES COUNTIES

Bryce McCandless' No. 1 Beeville Natl Bank, 330 ft. out of NW cor. of 142-ac. tract in G. B. Meyers Sur.
Derrick standing.
Houston Oil Co.'s No. 5-B Neuhaus, B.S.&F. Sur., 660 ft. S of No. 3-B.
Derrick.
Nichols, Hindman et al's No. 1 Weldon & Lackey, 1,694 ft. NW line, 1,607 ft. SW line, 40-ac. tract, J. Gomes Sur. (Goliad County).
No report.
Magnolia Pet. Co.'s No. 3 Porter, 660 ft. W of No. 2 and 330 ft. N of S line of lease.
Rerunning csg. 3,672 ft.
Magnolia Pet. Co.'s No. 4 Scarborough, E. Talley Sur., 330 ft. N line, 330 ft. E line of lease.
Comp. 3,646 ft.; no gauge.
Magnolia Pet. Co.'s No. 5 Scarborough, 660 ft. S of No. 2 and 330 ft. from the W line of lease.
Derrick.
United Prod. Co.'s No. 46 Ray, 330 ft. E line of tract and equidistant offset Houston Oil Co.'s No. 3-B Neuhaus, W. J. Porter Sur.
T.D. 4,060 ft.; P.B. to 3,646 ft. to set csg.

TULETA—BEE COUNTY

Blanco Oil Co.'s No. 1 Martinson, 330 ft. N line and W line of N 100 acres, SE Sec. 9, Ragsley Subd., Uranga grant.
Drlg. 340 ft.
A. A. Buchanan's No. 1 Perez, 330 ft. N line, 330 ft. E line SE Sec. 9, Uranga grant.
T.D. 3,896 ft.; sand 3,886-95 ft.; showing gas.
E. M. Jones' No. 2 Robinson, Uranga grant, W offset Walton & Heard's No. 1 Rapp.
Rig.
E. M. Jones' No. 4 Robinson, 990 ft. S line, 330 ft. E line of SW Sec. 5, Ragsley Subd., Uranga grant.
Coring sand 3,903 ft.
W. M. Jones' No. 1 Skinner & Harris, 330 ft. from N and W lines of E 80-ac. of NW of Sec. 10 Ragsley Subd. of Uranga grant.
Location.
Heyser, Heard & Jones' No. 1 Rapp, Uranga grant, W offset McKay's No. 1 Rapp.
Derrick.
Walton & Heard's No. 3 Rapp, 330 ft. from S and E lines of SW SE Sec. 5, Ragsley Subd. in Uranga grant.
Moving in.
Wrightsman Oil Co.'s No. 1 Unzicker, 330 ft. from S and E lines of quarter Sec. 6, Ragsley Subd., Uranga grant.
Location.

VON ORMY—BEXAR COUNTY

Texas Pet. Co.'s No. 2 E. B. Carruth, 500 ft. S of Von Ormy Oil Co.'s No. 1 Carruth in F. Rolen Sur. No. 48.
Abd. 940 ft.
W. L. Umburn's No. 1 Bilhartz, in SW cor. of tract, offsetting Strumberg well, F. Rolen Sur.
T.D. 670 ft.; showing oil 660 ft.

DUNLAP—CALDWELL COUNTY

Bob Rose's No. 2-B Pierce, Solomon Seale Sur., 540 ft. SE line, 150 ft. NE line, 100-ac. tract.
S.D. 2,539 ft.

DRISCOLL—DUVAL COUNTY

Continental Oil Co.'s No. 3-A Clara Driscoll, 500 ft. N, 2,000 ft. E of SW cor. Sec. 23.
Moving in.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Bridwell Oil Co.'s No. 7 Hahl, 220 ft. from E line, 677 ft. from S line of Blk. 28, Sur. 250.
T.D. 2,389 ft.; I.P. 50 bbls. per day; sand 2,381-89 ft.; set 7-in. csg. 2,380 ft.; comp.
Bridwell Oil Co.'s No. 8 Hahl, 825 ft. from E line, 330 ft. from S line of Blk. 28, Sur. 250.
Building derrick.
Al Buchanan's No. 4 D.C.R.C., 1,650 ft. from N line, 1,910 ft. from E line of Sur. 206.
Rigging up.
Chiquita Oil Co.'s No. 2 Richardson, 150 ft. from W line, 250 ft. from N line, Blk. 3, Sur. 3.
Drlg. 3,400 ft.
Edgington & Murray's No. 1 Winch & Henne, 330 ft. from N and E lines of Blk. 15 in Sur. No. 250.
Drlg. 1,350 ft.
Gov. Wells Oil Co.'s No. 3 State, 330 ft. from S line, 1,650 ft. from W line of N half NW Sur. 360.
Rigging up.
K. F. Hasselman's No. 3 Moody, 220 ft. from W line, 150 ft. from S line of S half SW of Sur. No. 60.
Rig up.
Humble Oil & Ref. Co.'s No. 39 Paul White, 330 ft. from W line, 4,290 ft. from S line of Sur. 58.
W.O.C. 2,244 ft.; set 7-in. at 2,212 ft.; sand from 2,226-44 ft.
Humble Oil & Ref. Co.'s No. 40 Paul White, 3,630 ft. from S line, 660 ft. from W line of Sur. 58.
T.D. 2,250 ft.; W.O.C., set 7-in. at 2,237 ft.
Humble Oil & Ref. Co.'s No. 41 Paul White, 2,310 ft. from S line, 660 ft. from W line of Sur. 58.
Location.
Humble Oil & Ref. Co.'s No. 42 Paul White, 990 ft. from S line, 660 ft. from W line of Sur. 58.
Location.
Magnolia Pet. Co.'s No. 11 D.C.R.C., 330 ft. from N line, 990 ft. from E line of SE NE Sur. 59.
Magnolia Pet. Co.'s No. 34 D.C.R.C., 330 ft. from E line, 2,310 ft. from S line of Sur. 208.
Sand 2,308 ft.; set 7-in. csg. at 2,307 ft.
T.D. 2,308 ft.; W.O.C.
Magnolia Pet. Co.'s No. 35 D.C.R.C., 330 ft. from N and W lines of SW Sur. 209.
Location.
Magnolia Pet. Co.'s No. 6 Hahl-Sutherland, 330 ft. from N line, 1,650 ft. from W line of Sur. 61.
Location.
Magnolia Pet. Co.'s No. 9 Duval County Ranch, 330 ft. S line, 660 ft. E line, NE Sur. 59.
T.D. 2,233 ft.; I.P. 240 bbls. daily, sand at 2,195-2,233 ft.; set 7-in. csg. at 2,195 ft.; comp.
Magnolia Pet. Co.'s No. 8 J. W. Riley, 990 ft. from W line, 330 ft. from S line of Sur. No. 45.
Testing; T.D. 2,262 ft.; sand 2,245-62 ft.; set 7-in. csg. 2,245 ft.
Nessly & Brown's No. 1 W. P. Runnels, 330 ft. from N line, 250 ft. from W line of E half of NW of Sur. 62.
T.D. 1,200 ft.; drlg.
Parr Oil Co.'s No. 4 D.C.R.C., 330 ft. from N and E lines of W half NE of Sur. 363.
T.D. 2,253 ft.; put on pump.
Reynosa Oil Corp.'s No. 1 Duval County Ranch Co., 330 ft. from S and W lines of Sur. 362.
Rigging up.
Smith & Storey's No. 8 Lundell, 250 ft. from S and W lines of SE NE of Sur. 48.
T.D. 2,297 f...; I.P. 75 bbls. per day; sand 2,275-97 ft.; set 7-in. csg. 2,270 ft.; comp.
Smith & Story's No. 9 Lundell, 330 ft. from N and E lines of SE of Sur. 48.
T.D. 1,480 ft.; drlg.
Sun Oil Co.'s No. 4 Norton, 330 ft. from N and W lines of Blk. 19 in Sur. No. 250.
T.D. 2,315 ft.; fishing for swab.
Sun Oil Co.'s No. 68 Weiderkehr, 330 ft. from S and W lines of NE NW of Sur. No. 53.
Set csg. 2,225 ft.
Sun Oil Co.'s No. 71 Weiderkehr, 330 ft. from N line, 990 ft. from E line of Sur. 2.
Sand 2,248-68 ft.; set 7-in. csg. 2,245 ft.; T.D. 2,268 ft.; test.
Texas Co.'s No. 1 Tom Graham, 5,065 ft. N 65 deg. E and 1,130 ft. S 25 deg. E, W cor. Geo. Reynolds Sur. 572.
Drlg. shale 3,425 ft.
Trapshooter Reilly's No. 1-B C. W. Hahl, 150 ft. from E line, 200 ft. from S line of Blk. 23, Sur. 250.
Location.
E. F. Wilson's No. 1-A A. Broadbeck, 330 ft. from N and W lines of SW SE Sec. 16.
Derrick.

LUCAS—LIVE OAK COUNTY

Lion Oil & Ref. Co.'s No. 2 McNeil, J. Curry Sur., 660 ft. N of No. 1.
Derrick.
Houston Oil Co.'s No. 27 Cartwright, 1,000 ft. NW of No. 10 on 11,389-ac. tract in Choichado Sur.
Location.

JACOB POOL—McMULLEN COUNTY

Benson et al's No. 9 John Stix, midway between No. 1 and No. 6, Blk. 40, Sur. 7.
T.D. 1,600 ft.; P.B. to 704 ft.; W.O.C.
E. W. Hopkins' No. 1 H. L. Lark, 160 ft. from N and W lines of W half of Blk. 30, Scrugham Sur.
Moving in rig.
Kennon's No. 3 Lark, 660 ft. from N line 330 ft. from E line of E½ of Blk. 15 Scrugham Sur.
T.D. 1,067 ft.; P.B. to 1,061 ft.; to pump.
C. R. Kennon's No. 4 H. L. Lark, 175 ft. from S line, 175 ft. from W line of E 20-ac. of Blk. 15 of Scrugham Sur.
Location.
C. R. Kennon's No. 5 H. L. Lark, 175 ft. from S and E lines of E half of Blk. 15 of Scrugham Sur.
Location.
R. P. Lightfoot's No. 1 Lark, 160 ft. E line and 300 ft. S line, 33-ac. tract, Blk. 134, E. W. B. Schrugham Sur.
Drlg. plug 1,011 ft.
Loma Oil Co.'s No. 29-A Jacobs, 660 ft. W of No. 28-A, in Sur. No. 7.
No report.
L. L. Motes' No. 1 Lark, 150 ft. from N and W lines of Blk. 30, Scrugham Sur., or 200 ft. NE line and 2,500 ft. NW line of Sur.
Drlg. plug 1,011 ft.
Siemp & Hockaday's No. 1 Lark, 1,320 ft. N of No. 3 Longhorn, in Scrugham Sur.
T.D. 1,032 ft.; 250 ft. of oil in hole, prepare to pump.
Ormsby & Stewart's No. 4 Jacob, one-half mi. S of No. 3.
T.D. 150 ft.; drlg.
A. P. Pierce's No. 1 Lark, 150 ft. out of NW cor. Blk. 41, Schrugham Sur.
T.D. 1,060 ft.; S.D.
Reynosa Oil Corp.'s No. 1 Jacob, 678 ft. N, 220 ft. W of SW cor. of W. H. Jacob Sur. 7 in Sur. 9.
T.D. 924 ft.; sand 928-34 ft.; set csg., pumped 7 bbls. in 3 hrs.; drlg. deeper.
Stewart-Smith & Storey's No. 2 L. Jacobs, John Fadden Sur. No. 8, 660 ft. E of No. 1.
Drlg. 860 ft.
Texico Oil Co.'s No. 2 L. Jacob, 660 ft. N of No. 1 Benham Sur.
Location.
R. P. Whitefield's No. 1-A Jacob, 1,500 ft. from W line, 1,200 ft. from S line of SW of Sur. 17.
Spudded.

LOS OLMOS—STARR COUNTY

J. P. Kennedy's No. 3 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77 in Los Olmos Field.
Location.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son 1,320 ft. NE of No. 4-C La Sacatosa grant Location.

AGUA DULCE—NUECES COUNTY

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd.
Derrick down.
Clymore Prod. Co.'s No. 2-D Ingram, 660 ft. from S and W lines of Lot No. 7, Sec. 6, Peters Subd. No. 2.
Location.
Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7 Peters Subd. No. 2.
Moving in rig.
South Mineral Corp.'s No. 2 Ocher, 2,569 ft from S line, 417 ft. from E line of 95-ac tract in Sur. 418, Sec. 8.
T.D. 4,860 ft.; running electrical core tool.
Southern Mineral Corp.'s No. 3 Ocher, 2,159 ft. N of S line and 417 ft. from line of Ocher 202.52-ac. tract in Sec. 8.
Location.
Southern Mineral Corp.'s No. 4 Ocher, 1,230 ft. S line and 417 ft. E line of Ocher 202.52-ac. tract in Sec. 8.
Location

SAXET—NUECES COUNTY

Houston Oil Co.'s No. 3 W. W. Walton, 465 ft. from W line and between N and S lines of 16-ac. tract.
T.D. 4,872 ft.; I.P. 200 bbls. per day; comp.
Southern Minerals and Houston Oil Co.'s No. 1 Walton, C of 16-ac. tract.
Testing 4,862 ft.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 1 Bruni estate, 418 ft. from NE line, 260 ft. from NW line of Blk. 48, Sur. 8, Adams Subd. in Arispe grant.
Drlg. shale 2,650 ft.
Cole Pet. Co.'s No. 36 Benavides, Sur. No. 1, Callaghan homestead tract.
Drlg. shale 3,010 ft.
Harman Brown's No. 1 Bruni estate, 418 ft. from NE line, 260 ft. from SE line of Blk. 3, Sur. 8, Adams Subd. in Arispe grant.
T.D. 3,411 ft.; top sand to test.
Kalmore's No. 1-B Bruni, 330 ft. to W line, 418 ft. SW line, Blk. 23, Sur. 5, Adams Subd., Mariano Arispe grant.
Sand 2,287-2,305 ft.; 6⅝-in. csg. 2,297 ft.
O. W. Killam's No. 26, Bruni, Sur. 9, Adams Subd., Mariano Arispe grant, 660 ft. S of Cole Pet. Co.'s No. 35 Benavides.
Coring 3,400 ft.
O. W. Killam's No. 25 Bruni (formerly No. 1 Kulmor), Sur. 6, Adams Subd., Mariano Arispe grant.
T.D. 3,417 ft.; top sand 3,408 ft.; tested 25 fourbles of oil, 3 joints of water.
United Prod. Corp.'s No. 5 Brennan Benavides, Mariano Arispe grant; common cor. Blks. 332, 333, 348, 349.
Drlg. 275 ft.

SANDIA—JIM WELLS COUNTY

O. W. Killam's No. 1 Wade, 100 ft. NE line, 1,400 ft. NW line, Lot 1, Blk. C, Wade Subd.
Abd. 3,606 ft.

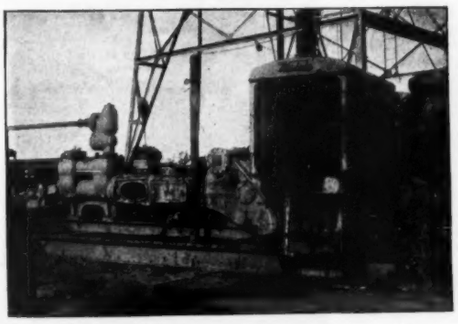
TAYLOR—WILLIAMSON COUNTY

Jackson et al's No. 1 Bozarth 95.8-ac. tract, 2,600 ft. from NW line, 3,500 ft. from NE line, S. Miller Sur.
Spudded in and drlg.
R. Wilder's No. 1 W. I. Cain, 200 ft. from N line, 160 ft. from E line of S half of Cain 100-ac. tract in S. Miller Sur.
T.D. 1,615 ft.; showing little oil; to set csg.

LAS ESCOBAS—ZAPATA COUNTY

Texas Co.'s No. 54 Whitehead, Cerrito Blanco Sur.
Sand 1,203-07 ft.; T.D. 1,227 ft.; drlg. plug.

WILDCATTING with John R. Bunn



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For wildcatting in Northern Mexico, John R. Bunn uses his own portable rotary, designed to drill to 6500 feet. Power is supplied by Waukesha-Hesselman Oil Engines, burning Diesel Oils and equipped with Twin Disc Power Take-Off Units of the heavy duty, gear tooth drive type. Especially developed for oil field installations, this No. 7243 G. T. Power Take-Off meets the demand for an open type ventilated clutch and housing. Waukesha's past experience with this take-off, as well as the experience of a number of their clients, was the reason for its selection for this heavy work. . . Engineering data on request or write for specific recommendations. *Twin Disc Clutch Company, 1328 Racine St., Racine, Wis.*

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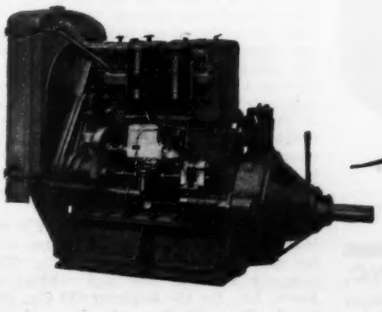

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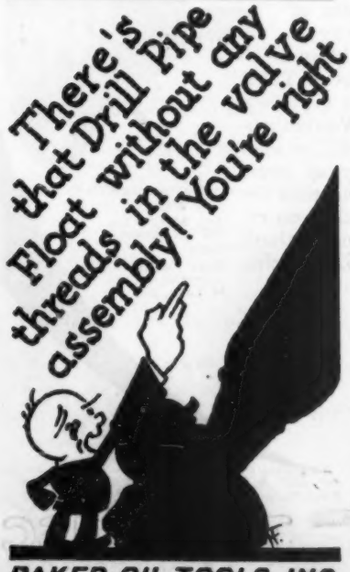

BAKER OIL TOOLS, INC.
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Among Gulf Coast Drilling Contractors

Beans, brawn and bustle—the time-honored ingredients for success in the oil producing business, and rugged individualism—scored heavily again when Garrett and Jack Boone, and their associates, completed a 600-bbl. wildcat well recently in Trinity County, opening up a play which is likely to extend over several counties.

H. B. Jordan, drilling contractor on the well and associate of the Boone Brothers in the enterprise, laughingly told visitors at the well some of the difficulties surmounted in completing the gusher. Location of the well is in mixed hardwood and pine timber. With little or no cash to go on, and limited credit available, the boys made the first 1,900 feet of hole firing with pine knots gathered from the surrounding forest. Older pioneers who have been over the same route know what this means. At 1,900 feet, after definitely encountering gas and oil sands, the operators were enabled to trade 40 acres of their lease for 700 bbls. of oil. So greatly did this facilitate progress that the next 136 feet, where the hole was bottomed, were made with less than 200 bbls. of the fuel oil. Estimating the 40 acres as worth a minimum of $1,000 an acre, the fuel oil used in making the last 136 feet of hole cost the operators approximately $200 a barrel. But, such is the life of a wildcatter.

H. B. Jordan, who is still a young man, entered the oil fields at Sour Lake in 1920, serving as a roughneck for Gulf Production Co. After two months, he transferred to the Gulf company's operations at Hockley. In 1922 he went to California, where he served a year as roughneck and driller with the Pan American Oil Co. In 1923 he went to South America with the Gulf company, serving as a derrickman and driller in the Maracaibo district. After eght months of this, he joined the Standard Oil Co. (New Jersey) in eastern Venezuela. In 1931 he returned to the United States and entered the oil business for himself. He was associated with John Deering in drilling a well at Hockley, where he subsequently purchased a ranch. Drilling of the Boone Brothers well is the first drilling activity in which he has participated recently. If Boone Brothers decide to develop their own acreage in the Trinity Field, Jordan will probably be awarded the contract drilling work.

Smith & McDannald are moving a rig into the Refugio Field to drill a gas well for the Stanolind Oil & Gas Co. The company also has four rigs running at Bosco, La., for the Superior Oil Co., one for the Pure Oil Co. at Louise, and one for the Tide Water-Texas Seaboard companies in the Cayuga Field.

Carl B. King is rigging up to drill a well for the Petroleum Marketing Co. in East Texas. Other new locations will be announced in the next several days.

George Echols is moving his big gasoline rig from No. 1 Moreno location, about 8 miles southeast of the Sun Oil Co.'s Guerra Pool block in Starr County, where he will drill a deep test for the Sun Oil Co. Echols has four other contract wells drilling at this time, including a new location for the Continental Oil Co. on the Driscoll ranch in Duval County.

B. J. (Bird) Smith, who is drilling a well for W. C. Battle, trustee, about 12 miles northwest of Madisonville, is shut down temporarily and drilling a water well. Depth is 700 feet. Bob Spear is tool pusher on this rig for Mr. Smith.

Jeff Hooper and others, drilling a well for themselves in the Coleto Creek Field, Victoria County, picked up a good gas sand and will complete their well as a gas well for the time being, as there is a good demand for fuel in the field.

Boone Bros.' No. 1 Trinity State, Houston County

Later, this well will probably be drilled deeper to the oil pay.

Ted Schrader of Dallas, who has drilled wells throughout Southwest Texas and the Gulf Coast of Texas, was a visitor in Houston last week.

Rowan Drilling Co. is preparing to drill a wildcat for the Rio Oil Co. near Emory, Rains County, Texas. This well will be carried to the Woodbine sand. The company also has one rig running for the Amerada Petroleum Corp. at Stratton Ridge, Brazoria County; one for the same company in the Tomball Field; two for the Tide Water-Texas Seaboard companies in the Cayuga Field; one for the Humble Oil Co. in East Texas.

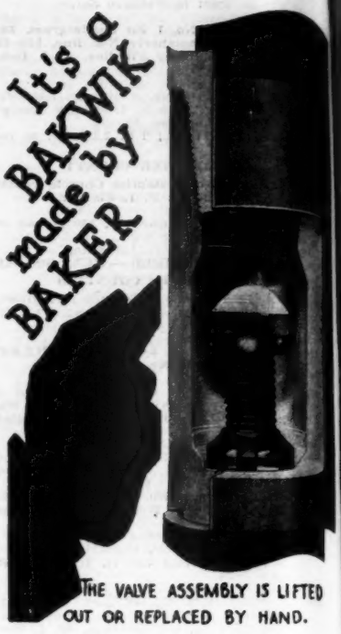
L. W. Capps' well for S. J. Sloan and others, No. 1 Vaughn (100-acre tract) in Waller County was completed and swabbed 10 bbls. of oil in four hours. Well is now being rigged with a pumping unit.

DeArman Brothers Drilling Co., who are drilling a well about a mile from the No. 1 Vaughn, above noted, is drilling at 3,579 feet in sandy shale.

San Patricio Drilling Co. is about ready to spud in its well for the McCarthy Oil Co. near Danbury, Tex.

W. T. (Billie) Parker, who has a contract to drill five or more wells for Cameron & Cameron in the Conroe Field, is drilling ahead at 3,140 feet on the first well.

It's a BAKWIK made by BAKER



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Bureau of Mines Statistics for the Month of July, 1934

SUPPLY AND DEMAND OF ALL OILS

(Thousands of barrels of 42 gallons)

	July, 1934	June, 1934	July, 1933	Jan.-July, 1934	Jan.-July, 1933
NEW SUPPLY:					
Domestic production:					
Crude petroleum	81,548	80,040	84,387	530,228	517,617
Daily average	2,631	2,668	2,722	2,501	2,442
Natural gasoline	2,945	2,838	2,769	20,454	19,078
Benzol*	122	160	163	1,027	754
Total production	84,615	83,038	87,319	551,709	537,449
Daily average	2,730	2,768	2,817	2,602	2,535
Imports:					
Crude petroleum	2,695	†3,575	3,411	20,368	19,673
Refined products	1,406	1,137	1,282	8,317	8,297
Total new supply, all oils	88,716	87,750	92,012	580,394	565,419
Daily average	2,862	2,925	2,968	2,738	2,667
Increase in stocks, all oils	3,225	2,095	5,963	‡9,180	17,440
DEMAND:					
Total demand	85,491	85,655	86,049	589,574	547,979
Daily average	2,758	2,855	2,776	2,781	2,585
Exports:					
Crude petroleum	4,128	3,795	4,523	22,970	20,478
Refined products	6,143	6,056	7,443	43,264	40,981
Domestic demand:					
Motor fuel	37,695	36,296	34,458	229,859	214,392
Kerosene	2,815	2,372	2,941	24,680	20,991
Gas oil and fuel oil	21,223	23,961	25,066	192,227	182,198
Lubricants	1,491	1,569	1,630	11,037	9,393
Wax	53	87	107	550	661
Coke	481	563	861	4,685	5,192
Asphalt	1,525	1,602	1,431	6,706	6,169
Road oil	1,357	1,262	1,067	4,278	2,902
Still gas (production)	4,142	3,707	4,524	25,101	25,960
Miscellaneous	137	148	144	1,021	847
Losses and crude used as fuel	4,301	4,237	2,754	23,196	17,815
Total domestic demand	75,220	75,804	74,083	523,340	486,520
Daily average	2,426	2,527	2,390	2,469	2,295
STOCKS:					
Crude petroleum	355,260	357,239	350,894	355,260	350,894
Natural gasoline	4,551	4,574	3,723	4,551	3,723
Refined products	233,222	227,995	250,932	233,222	250,932
Total, all oils	593,033	589,808	605,549	593,033	605,549
Days' supply	215	207	218	213	234

*From Coal Division. †Receipts of foreign crude as reported to Bureau of Mines. ‡Decrease.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 gallons)

	July, 1934 Total	July, 1934 Daily av.	June, 1934 Total	June, 1934 Daily av.	Jan.-July, 1934	Jan.-July, 1933
CRUDE PETROLEUM:						
Runs to stills	79,812	2,575	76,054	2,535	515,476	492,425
MOTOR FUEL:						
Production	37,641	1,214	35,615	1,184	242,493	232,798
Imports	.....	.....	.....	.....	1	7
Exports*	1,717	55	2,057	69	14,909	18,155
Stocks, gasoline	52,469	.....	54,217	.....	52,469	50,340
Stocks, natural gasoline	4,551	.....	4,574	.....	4,551	3,723
Domestic demand	37,695	1,216	36,296	1,210	229,859	214,392
KEROSENE:						
Production	4,256	137	4,206	140	30,701	28,521
Imports	.....	.....	.....	.....	.....	.....
Exports	778	25	969	32	5,580	4,719
Stocks	6,998	.....	6,335	.....	6,998	7,785
Domestic demand	2,815	91	2,372	79	24,680	20,991
GAS OIL AND FUEL OIL:						
Production	27,420	885	27,307	910	188,587	182,160
Transfers†	611	20	871	29	5,006	5,541
Imports:						
Bonded warehouses	869	28	875	29	6,249	3,051
For domestic use	516	17	236	8	1,889	5,117
Exports	2,626	85	2,230	74	16,564	11,606
Stocks	114,944	.....	109,377	.....	114,944	131,036
Domestic demand	21,223	685	23,961	799	192,227	182,198
Railroad (Class I)‡	(§)	(§)	3,687	123	¶21,551	¶19,500
Pub. util. pow. plants‖	912	30	883	30	5,972	5,234
Other	20,311	655	19,391	646	164,704	157,464
Bunker oil	2,327	75	2,449	82	17,357	19,575
LUBRICANTS:						
Production	2,209	71	2,211	74	15,534	13,038
Imports	.....	.....	.....	.....	.....	.....
Exports	688	22	663	22	4,745	4,821
Stocks	6,782	.....	6,752	.....	6,782	7,109
Domestic demand	1,491	48	1,569	52	11,037	9,393
WAX (thous. of pounds):						
Production	34,160	1,102	40,320	1,344	284,480	254,240
Imports:						
Bonded warehouses	333	11	280	9	3,443	952
For domestic use	1,093	35	2,432	81	24,206	12,352
Exports	13,804	445	12,185	406	111,617	147,147
Stocks	115,137	.....	108,087	.....	115,137	98,536
Domestic demand	14,732	475	24,311	810	154,208	185,489
COKE (short tons):						
Production	96,000	3,097	104,400	3,480	749,200	939,800
Stocks	493,800	.....	504,100	.....	493,800	1,149,100
ASPHALT (short tons):						
Production	317,500	10,242	278,400	9,280	1,457,600	1,213,600
Imports (natural)	2,900	94	2,900	97	13,600	11,500
Stocks	359,300	.....	358,000	.....	359,300	278,100

*Includes benzol, 12,086 bbls. in July, 1934. †Net transfers in California. ‡Interstate Commerce Commission. §Not available. ¶January-June. ‖U. S. Geol. Survey.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	July, 1934 Total	July, 1934 Daily av.	June, 1934 Total	June, 1934 Daily av.	Jan.-July, 1934	Jan.-July, 1933
Appalachian:						
Pennsylvania Grade	2,077	67	2,162	72	14,362	12,605
Other (inc. Kentucky)	635	21	627	21	3,745	3,850
Lima-N. E. Ind.-Mich.	1,085	35	1,066	36	7,033	4,164
Ill.-S. W. Ind.	386	12	489	16	3,022	2,678
Mid-Continent:						
N. La. and Ark.	2,052	66	1,953	65	13,335	13,146
W. Texas-S. E. New Mex.	6,319	204	5,403	180	41,946	44,534
East Texas	18,807	607	17,087	570	112,483	
Other (Okla., Kans., N. Tex., etc.)	28,989	935	26,958	899	178,611	268,185
Gulf Coast	5,631	182	6,165	205	43,414	42,577
Rocky Mountain	1,685	54	1,672	56	9,162	8,535
California	14,989	483	14,561	485	98,016	96,615
Total demand	82,655	2,666	78,143	2,605	525,129	496,889
Exports	4,128	133	3,795	127	22,970	20,478
Domestic demand	78,527	2,533	74,348	2,478	502,159	476,411
Foreign petroleum	2,876	93	3,250	109	19,998	22,576
Total domestic demand	81,403	2,626	77,598	2,587	522,157	498,987

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS

(Thousands of barrels of 42 gallons)

	July, 1934 Total	July, 1934 Daily av.	June, 1934 Total	June, 1934 Daily av.	Jan.-July, 1934	Jan.-July, 1933
Arkansas	1,016	33	963	32	6,564	6,678
California:						
Huntington Beach	1,455	47	1,423	48	8,888	5,968
Kettleman Hills	2,082	67	1,841	61	12,132	12,796
Long Beach	2,096	68	2,168	72	13,728	15,041
Santa Fe Springs	1,286	41	1,254	42	8,861	11,249
Rest of State	9,135	295	8,781	293	58,923	54,495
Total California	16,054	518	15,467	516	102,532	99,549
Colorado	109	3	88	3	632	564
Illinois	394	13	392	13	2,694	2,232
Indiana	74	2	72	2	481	376
Kansas	4,210	136	4,101	137	27,203	23,766
Kentucky	427	13	440	15	2,625	2,614
Louisiana:						
Gulf Coast	2,320	75	1,921	64	11,487	8,097
Rest of State	748	24	708	24	5,400	5,692
Total Louisiana	3,068	99	2,629	88	16,887	13,789
Michigan	939	30	935	31	6,282	3,299
Montana	341	11	292	10	1,789	1,172
New Mexico	1,460	47	1,418	47	9,551	7,714
New York	335	11	313	10	2,127	1,739
Ohio:						
Central and Eastern	277	9	273	9	1,883	1,844
Northwestern	80	3	89	3	579	583
Total Ohio	357	12	362	12	2,462	2,427
Oklahoma:						
Oklahoma City	5,396	174	6,084	203	39,049	35,304
Seminole	3,399	110	3,463	116	22,860	23,501
Rest of State	6,814	220	6,962	232	46,544	41,461
Total Oklahoma	15,609	504	16,509	551	108,453	100,266
Pennsylvania	1,270	41	1,288	43	8,372	7,064
Tennessee	1	.....	1	.....	6	3
Texas:						
Gulf Coast	5,103	165	5,011	167	34,399	33,560
West Texas	4,341	140	4,161	139	28,646	34,164
East Texas	16,822	543	16,582	553	108,221	120,320
Panhandle	1,857	60	1,752	58	11,507	9,798
Rest of State	6,148	198	5,738	191	39,092	37,869
Total Texas	34,271	1,106	33,244	1,108	221,865	235,711
West Virginia	336	11	343	11	2,357	2,082
Wyoming:						
Salt Creek	538	17	537	18	3,766	4,175
Rest of State	739	24	646	21	3,580	2,397
Total Wyoming	1,277	41	1,183	39	7,346	6,572
Total United States	81,548	2,631	80,040	2,668	530,228	517,617

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

	July, 1934 Total	July, 1934 Daily av.	June, 1934 Total	June, 1934 Daily av.	Jan.-July, 1934	Jan.-July, 1933
Appalachian:						
Pennsylvania Grade	2,075	67	2,077	69	13,775	11,779
Other (inc. Kentucky)	571	18	581	19	3,595	3,567
Lima-N. E. Ind.-Mich.	1,019	33	1,024	34	6,861	3,889
Ill.-S. W. Ind.	468	15	464	15	3,175	2,601
Mid-Continent:						
N. La. and Ark.	1,764	57	1,671	56	11,964	12,370
W. Texas-S. E. New Mex.	5,768	186	5,546	185	37,956	41,664
East Texas	16,822	543	16,582	553	108,221	120,320
Other (Okla., Kans., N. Tex., etc.)	27,824	898	28,100	937	186,255	171,699
Gulf Coast	7,423	240	6,932	231	45,886	41,657
Rocky Mountain	1,760	56	1,596	53	10,008	8,522
California	16,054	518	15,467	516	102,532	99,549
Total	81,548	2,631	80,040	2,668	530,228	517,617

STOCKS OF CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

	July 31, 1934	June 30, 1934	July 31, 1933
At refineries by location:			
East Coast: Domestic	10,744	10,540	8,938
Foreign	2,516	2,857	2,891
Appalachian	1,454	1,599	2,233
Indiana, Illinois, Kentucky, Michigan	4,511	4,458	3,295
Oklahoma, Kansas and Missouri	5,786	6,122	4,108
Texas: Inland	1,709	1,872	2,544
Gulf Coast: Domestic	19,353	19,804	6,303
Foreign	305	147	100
Louisiana Gulf Coast: Domestic	3,559	3,631	3,854
Foreign	694	602	710
Arkansas and Inland Louisiana	616	711	693
Rocky Mountain	13,337	13,183	12,635
California	8,413	8,916	10,999
Total	64,107	65,442	59,303
At refineries by origin:			
Pennsylvania Grade	1,345	1,388	2,048
Other Appalachian (inc. Kentucky)	585	622	500
Lima-Northeast Indiana-Michigan	471	544	245
Illinois-Southwest Indiana	111	134	143
North Louisiana and Arkansas	2,152	2,013	2,296
West Texas and Southeast New Mexico	4,029	4,203	3,237
East Texas	7,443	7,604	
Oklahoma, Kansas, North Texas, etc.	16,147	17,065	18,784
Gulf Coast	6,681	6,198	4,733
Rocky Mountain	13,305	13,149	12,617
California	8,413	8,916	3,701
Foreign	3,425	3,606	10,999
Total	64,107	65,442	59,303
Pipe line and tank farm:			
Pennsylvania Grade	3,691	3,635	4,091
Other Appalachian (inc. Kentucky)	715	732	740
Lima-Northeast Indiana-Michigan	1,109	1,107	759
Illinois-Southwest Indiana	11,238	11,138	11,096
North Louisiana and Arkansas	8,409	8,836	10,819
West Texas and Southeast New Mexico	24,946	25,323	29,833
East Texas	34,156	35,950	
Oklahoma, Kansas, North Texas, etc.	145,816	146,093	175,375
Gulf Coast	11,871	10,592	10,829
Rocky Mountain	15,028	15,129	15,123
California	25,834	24,886	25,626
Total	282,813	283,411	284,291
Lease (producers') stocks	8,340	8,386	*7,300
Total refinable crude in the United States	355,260	357,239	350,894

*East of California only.

(Continued on Next Page)

RUNS TO STILLS AND OUTPUT OF REFINERIES, JULY, 1934

(Thousands of barrels of 42 gallons)

INPUT—	Crude oil: Domestic	Crude oil: Foreign	Unfinished rerun (net): Total	Unfinished rerun (net): Crude gasoline	Unfinished rerun (net): Other	Natural gasoline
East Coast	12,624	2,606	15,230	137	—730	59
Appalachian	3,242	....	3,242	—48	93	20
Ind., Ill., Ky., etc.	10,674	....	10,674	60	—398	175
Okla., Kans., Mo.	8,659	....	8,659	99	143	441
Texas Inland	5,550	....	5,550	—158	—189	282
Texas Gulf	15,269	76	15,345	263	301	143
Louisiana Gulf	3,440	171	3,611	29	—58	17
Ark. and La. Inland	1,875	....	1,875	105	—127	40
Rocky Mountain	1,506	....	1,506	47	—37	61
California	14,120	....	14,120	—62	—266	*909
Total	76,959	2,853	79,812	463	—1,268	2,147

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thou. of pounds)
East Coast	6,111	760	1,568	3,613	530	16,520
Appalachian	1,580	202	182	435	417	5,880
Ind., Ill., Ky., etc.	5,849	359	929	1,350	201	2,800
Okla., Kans., Mo.	4,944	598	708	1,700	243	2,240
Texas Inland	2,875	306	340	1,406	22	280
Texas Gulf	7,135	1,096	1,489	4,248	540	3,640
Louisiana Gulf	1,312	324	413	1,108	40	1,400
Ark. and La. Inland	847	78	95	618	10	.....
Rocky Mountain	764	56	64	362	12	1,400
California	5,606	467	1,873	5,510	144	.....
Total	†37,023	4,256	7,651	20,380	2,209	34,160

	Coke (tons)	Asphalt (tons)	Road oil	Still gas	Miscellaneous	Shortage
East Coast	12,400	154,400	94	864	40	106
Appalachian	2,200	9,400	31	232	22	132
Ind., Ill., Ky., etc.	44,200	54,200	340	818	7	99
Okla., Kans., Mo.	14,800	8,000	204	451	41	318
Texas Inland	5,000	.....	58	131	2	319
Texas Gulf	12,600	16,200	32	949	6	381
Louisiana Gulf	....	27,500	22	124	....	90
Ark. and La. Inland	200	6,400	67	47	4	91
Rocky Mountain	4,600	4,900	147	75	2	40
California	.....	34,500	314	451	25	141
Total	96,000	317,500	1,299	4,142	129	1,717

*Includes 107,000 bbls. run through pipe lines. †Includes 387,000 bbls. special naphthas. ‡Includes 5,000 bbls. liquefied petroleum gas made from natural gasoline.

CRACKED OPERATIONS

Fresh cracking stock charged to stills: Crude, 4,627,000 bbls.; other oils, 38,793,000 bbls.; gasoline produced by cracking, 16,500,000 bbls.; fuel oil produced by cracking, 16,539,000 bbls.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, JULY, 1934

(Thousands of barrels of 42 gallons)

	Straightrun: Total	Straightrun: Per cent (*)	Straightrun: Per cent (†)	Cracked: Total	Cracked: Per cent (*)	Cracked: Per cent (†)	Nat. gaso.: Total	Nat. gaso.: Per cent (†)	Gasoline: Total	Gasoline: Per cent (*)
East Coast	3,145	20 6	51.5	2,097	19.1	47.6	59	.9	6,111	39.7
Appalachian	720	22.2	45.6	840	25 9	53.2	20	1.2	1,580	48.1
Ind., Ill., etc.	2,557	24.0	43.7	3,117	29.2	53 3	175	3.0	5,849	53.2
Okla., Kans., Mo.	2,394	27.6	48.4	2,109	24.4	42 7	441	8.9	4,944	52.0
Texas Inland	1,673	30.1	58 2	920	16.6	32.0	282	9.8	2,875	46.7
Texas Gulf	3,320	21.7	46 5	3,672	23.9	51.5	143	2.0	7,135	45.6
Louisiana Gulf	736	20.4	56 1	559	15.5	42.6	17	1.3	1,312	35.9
Ark. & La. Inland	385	20.5	45.5	422	22 5	49.8	40	4.7	847	43.0
Rocky Mountain	394	26.2	51 6	309	20.5	40.4	61	8.0	764	46.7
California	3,057	21.7	54 5	1,645	11.6	29.4	904	16.1	5,606	33.3
Total	18,381	23.0	49.6	16,500	20.7	44.6	2,142	5.8	37,023	43.7

*Per cent of crude run. †Per cent of total gasoline output.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	July, 1934	June, 1934	July, 1933	Jan.-July, 1934	Jan.-July, 1933
Motor fuel turned into lines	4,233	4,072	3,488	25,264	20,730
Motor fuel delivered from lines	4,191	4,134	3,523	25,242	20,760
Shortage	14	*1	11	57	36
Stocks in lines and working tanks end of month	1,280	1,192	1,142	1,280	1,142

*Overage.

STOCKS HELD BY REFINING COMPANIES, JULY 31, 1934

(Thousands of barrels of 42 gallons)

	Gasoline: At refineries	Gasoline: Bulk and pipe lines	Gasoline: Total	Kerosene	Gas oil and distillate fuels	Residual fuel oils
East Coast	5,702	10,128	15,830	1,756	4,502	7,014
Appalachian	963	869	1,832	214	237	429
Ind., Ill., Ky., etc.	4,671	3,288	7,959	652	2,548	2,299
Okla., Kans., Mo.	3,481	1,757	5,238	653	1,190	1,749
Texas Inland	1,502	58	1,560	145	276	1,512
Texas Gulf	3,776	786	4,562	1,715	4,258	5,541
Louisiana Gulf	895	567	1,462	514	1,651	1,583
Ark. and La. Inland	307	9	316	30	171	983
Rocky Mountain	828	.....	828	131	155	297
California	11,010	1,872	12,882	1,187	4,615	73,834
Total	33,135	19,334	52,469	6,998	19,603	95,341

	Wax (thou. of lbs.): Lubricants	Crude scale	Refined	Total	Coke (tons)
East Coast	1,992	21,356	28,928	50,284	24,000
Appalachian	1,010	15,162	1,943	17,106	6,900
Ind., Ill., Ky., etc.	523	14,926	1,899	16,825	56,600
Okla., Kans., Mo.	452	2,671	874	3,545	50,600
Texas Inland	119	.....	216	216	64,000
Texas Gulf	1,645	2,591	12,827	16,418	108,100
Louisiana Gulf	110	804	1,548	2,352	400
Ark. and La. Inland	16	.....	.....	.....	100
Rocky Mountain	94	7,170	1,221	8,391	85,400
California	821	.....	.....	.....	97,700
Total	6,782	64,681	50,456	115,137	493,800

	Asphalt (tons)	Road oil	Miscellaneous	Unfinished oils: Crude gasoline	Unfinished oils: Other	Natural gasoline
East Coast	116,000	82	34	973	8,144	254
Appalachian	12,900	33	31	321	1,817	5
Ind., Ill., Ky., etc.	78,600	160	27	1,157	5,802	38
Okla., Kans., Mo.	9,000	236	30	635	5,011	78
Texas Inland	.....	48	8	278	1,123	12
Texas Gulf	13,100	26	26	1,667	9,870	176
Louisiana Gulf	29,500	18	.....	210	1,225	.....
Ark. and La. Inland	42,900	49	1	42	385	2
Rocky Mountain	4,400	148	8	129	1,800	9
California	52,900	151	49	1,030	4,389	2,387
Total	359,300	951	214	6,442	39,566	2,961

Grand total stocks refined products 233,222,000 bbls.

RECEIPTS OF FOREIGN CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

	July, 1934	June, 1934
Atlantic Seaboard:		
Venezuela	1,868	2,094
Colombia	108	485
Mexico	270	646
Trinidad	23	....
Gulf Coast:		
Mexico	208	384
Venezuela	218	72
Total	2,695	3,875

STOCKS OF CRUDE PETROLEUM BY STATES AND BY LOCATION

(Thousands of barrels of 42 gallons)

	July 31, 1934: Refinery	July 31, 1934: Tank farm and pipe line	July 31, 1934: Lease	July 31, 1934: Total	June 30, 1934: Refinery	June 30, 1934: Tank farm and pipe line	June 30, 1934: Lease	June 30, 1934: Total
Arkansas	509	3,691	330	4,530	547	3,864	330	4,741
California	8,413	25,334	1,634	35,881	8,916	24,886	1,705	35,507
Colorado	273	76	20	369	283	76	20	379
Georgia*	666	.....	.....	666	759	.....	.....	759
Illinois	1,290	10,807	100	12,197	1,259	10,916	95	13,270
Indiana	1,496	1,891	8	3,395	1,440	1,827	8	3,275
Kansas	1,750	12,582	410	14,742	1,838	12,520	420	14,778
Kentucky†	470	443	56	969	480	465	66	1,011
Louisiana‡	4,270	8,081	235	12,586	4,397	8,024	215	12,636
Maryland	1,258	.....	.....	1,258	1,309	.....	.....	1,309
Massachusetts§	1,022	.....	.....	1,022	1,310	.....	.....	1,310
Michigan	295	625	95	1,015	305	632	85	1,022
Missouri¶	183	3,510	.....	3,693	181	3,498	.....	3,677
Montana	210	501	70	781	210	506	70	786
New Jersey	5,611	287	.....	5,898	5,805	349	.....	6,154
New Mexico	7	293	180	480	9	311	180	500
New York	1,379	89	17	1,485	1,388	103	17	1,508
Ohio	1,143	7,551	85	8,779	1,197	7,657	95	8,949
Oklahoma	3,853	84,322	1,680	89,855	4,103	84,345	1,690	90,138
Pennsylvania	4,548	1,864	90	6,502	4,143	1,841	90	6,074
Texas	12,567	103,875	2,850	119,292	12,823	105,041	2,830	120,694
Utah	304	.....	.....	304	315	.....	.....	315
West Virginia	47	1,965	110	2,122	59	2,027	120	2,206
Wyoming‖	12,543	14,426	370	27,339	12,366	14,525	350	27,241
Total United States	64,107	282,813	8,340	355,260	65,442	283,411	8,386	357,239

*Includes South Carolina and Virginia. †Includes Tennessee. ‡Includes Alabama. §Includes Rhode Island. ¶Includes Iowa. ‖Includes Nebraska and South Dakota.

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN THE UNITED STATES*

(Thousands of barrels of 42 gallons)

	July, 1934	June, 1934	July, 1933	Jan.-July, 1934	Jan.-July, 1933
Gasoline	808	872	1,617	4,536	6,551
Natural gasoline	....	....	....	....	81
Kerosene	85	79	6	926	876
Gas oil and Diesel oil	....	3	..	1,313	1,286
Fuel oil	816	1,115	..	8,832	801
Lubricants	5	9	10	38	29
Asphalt	1	....	....	73	....
Miscellaneous	1	16	22	48	142
Total	1,716	2,094	1,655	15,766	9,766

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	July, 1934	June, 1934	July, 1933	Jan.-July, 1934	Jan.-July, 1933
Oil	1,182	1,126	548	6,984	3,541
Gas	93	124	73	669	462
Dry	392	363	248	2,308	1,922
Total	1,667	1,613	869	9,961	5,925

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, JULY, 1934*

	Completions: Oil	Completions: Gas	Completions: Dry	Total initial production (bbls.)	Average initial production (bbls.)	Drilling July 31
Texas	673	20	201	(†)	(†)	1,095
East Coast	299	...	8	538,200	1,808	266
Gulf Coast	81	1	45	(†)	(†)	167
Conroe	16	...	1	(†)	(†)	14
Greta	12	...	2	(†)	(†)	18
West Texas	28	2	7	(†)	(†)	124
California	25	...	17	35,900	1,440	211
Kettleman Hills	3	...	...	28,000	9,330	29
Long Beach	5	...	...	1,900	380	17
Huntington Beach	....	....	....	.....	.....	5
Oklahoma	97	3	38	(†)	(†)	393
Oklahoma County	6	...	...	(†)	(†)	22
Pottawatomie and Seminole County	19	...	4	(†)	(†)	66
New Mexico	9	...	4	(†)	(†)	61
Lea County (Hobbs)	8	...	...	(†)	(†)	13
Other states	378	70	132	(†)	(†)	1,202
Total United States	1,182	93	392	(†)	(†)	2,962

*From The Oil and Gas Journal and California office of the American Petroleum Institute. †Not available.

Pennsylvania Oil and Gas Men at Golf and Dinner

One hundred nine Pennsylvania oil and gas men attended a Dutch treat golf tournament and dinner party organized by A. D. (Bert) Sutherland, eastern salesman for Lee C. Moore & Co., at the Wildwood Country Club in Pittsburgh. A golf bag was won by J. V. Sarver, engineer, Peoples Natural Gas Co., for low score. N. F. Rohrkaste, secretary, Lee C. Moore & Co., was awarded a box of golf balls for the closest shot to No. 4 hole. B. H. Smyer, secretary, Pennsylvania Gas Co., won a gladstone bag as a dinner prize.

Some of the prominent Pennsylvania oil and gas men attending were the following: Fred Miller, chairman, S. R. Dresser Manufacturing Co.; George Ratcliffe, president, Pittsburgh Group, Columbia Gas & Electric Co.; John Tonkin, Peoples Natural Gas Co.; H. H. Phillips, treasurer, T. W. Phillips Oil & Gas Co.; S. W. Meals, president, Carnegie Natural Gas Co.; George Walker, president, United Natural Gas Co., and Frank Schauer, vice president, Equitable Gas Co.

George Wittmer, 3d, Wittmer Oil & Gas Co., was chairman of the entertainment committee.

DR. C. L. DAKE DEAD

Dr. Charles L. Dake, 51, educator and geologist of the Missouri School of Mines, Rolla, Mo., died at St. Luke's Hospital in Denver following a brain hemorrhage. Accompanied by Mrs. Dake, he had arrived the day before from Cody, Wyo., where he had spent two months in geological study.

Stronger, Tighter, Safer.. Corrugated Tank Decks!

{Under-Side Coated with REELKOTE}

PARKERSBURG pioneered the Gas-Tight Tank and has perfected a corrugated steel deck which brings even greater safety and economy to oil storage tanks.

Corrugations are so designed as to produce uniform strength over entire area and result in high bending resistance to pressure and vacuum. Channels, pressed into radial seams, produce perfectly matched, gas-tight joints. No rafters are required.

Tank sheets are of corrosion-resisting, copper-bearing steel. The under-sides of deck sheets are coated with REELKOTE, a new Bakelite reinforced spar varnish, scientifically applied to offset corrosive action of sour oil and hydrogen sulphide gas—resulting in longer life.

Guard your oil and tank investments and reduce erection time and costs by specifying Parkersburg Bolted Steel Tanks with corrugated decks, gas-tight accessories, and non-skid steel runways and stairways.

Ask the nearest Parkersburg representative for details.

***The* PARKERSBURG RIG AND REEL CO.**

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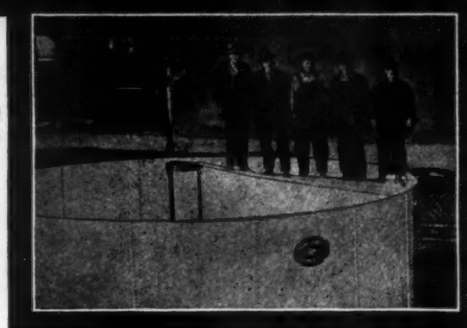
Branches in All Active Fields



Gas-Tight Accessories

Parkersburg gas-tight fittings will give added protection in conserving your petroleum products. Maintain the gravity of your crudes by equipping your tanks with Parkersburg accessories.

3-in-1 Valve

A valve for either pressure or vacuum relief or as a gauge hole cover. Simple, automatic . . . no springs to break . . . no gaskets to deteriorate . . . no valve stems to stick. An exclusive safety feature is that cover cannot be opened without checking its function as a valve.

Gauge Hole Cover

All-metal construction, there is nothing to deteriorate. Accurately machined; pleasing in appearance. Constructed of aluminum, it is impervious to the corrosive attacks of hydrogen sulphide.

by PARKERSBURG

368-A

Coordination THE FIRST REQUIREMENT OF Success
FLOAT COLLAR
GUIDE SHOE
● Six strings of casing already run below 9000 feet . . . only three broke circulation after being landed . . . consequently only three were cemented.
● Of the six strings, two were equipped with HOWCO Floating Equipment . . . *both were successful!* . . . One was the longest string of casing in the World . . . 9920 feet . . . facts, not opinion.
● While floating equipment alone may not have accounted for the large dollar loss in the unsuccessful strings, yet it must be carefully considered in the long chain of coordinated details vital to successful completion of today's deep wells.
HALLIBURTON
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FLOAT COLLAR AND GUIDE SHOE

Future of California as to Reserves and Markets

Deck view of crude oil tanker

By L P. STOCKMAN

LOS ANGELES, Calif., Sept. 17.—One of the most interesting features in connection with drilling operations in California during the current year is the fact that operators have reawakened to the necessity of maintaining crude oil reserves and that it is imperative to make additional discoveries in the immediate future. Failure of prospectors to discover new prolific fields with the frequency that has characterized exploratory work during the past decade is causing considerable anxiety among executives who readily admit the situation has reached an alarming point. As a consequence, California operators are scrutinizing the state with the greatest of care and most of them will now drill a test on acreage that, with the past two years, would have been turned down as not justifying exploration.

All the major companies in California invoked a drilling moratorium a few years ago during which period they refrained from all necessary drilling and clamped the lid on all wildcat exploration. This lasted about two years and while the respite from drilling greatly improved conditions by reducing the disparity between supply and demand it simultaneously reduced the number of potential discoveries during the period.

Additional wells will be drilled as soon as production reaches the point where there might be a possible pinch. There are enough crude oil reserves in sight to meet normal requirements for several years and the quantity available for refining depends almost entirely upon the drilling undertaken and whether operators continue to restrict production. Crude reserves are ample to meet normal conditions and consequently the quantity available for domestic consumption and export depend entirely upon the policy adopted by operators. Certain companies, it is true, will require additional supplies of crude to maintain their relative position but, taking the state as a whole, there is enough crude in sight to preclude any immediate shortage.

Major companies are not concerned so much about meeting the demand during the next five years as they are about building up a reserve for the succeeding five years and the years thereafter. There is no questioning that California's crude reserves are being depleted but those familiar with the vast amount of potential oil land in the state will wager there will be no rationing of gasoline for a long time. Improved production methods will eventually be developed to increase the ultimate recovery and exploration work will be conducted on a more advanced scale.

Ultimate Recovery

It may be interesting to check over the state's production to date and make an estimate of the future reserves recoverable under present methods of production. The ultimate crude oil recovery of California is more or less of a controversial issue and for this brief resume the approximation of known reserves is predicated on the possible ultimate recovery per acre with only minor consideration given to porosity, cubical content, saturation and other complicated factors which are pertinent to a comprehensive study. Calculations have purposely been reduced to a minimum and are ultra conservative. Additional discoveries are being made from time to time and each discovery will obviously substantially change the ultimate recovery. In addition there is a strong probability additional productive horizons will be opened in several existing fields, notably at Inglewood, Kettleman Hills, Mountain View and Dominguez.

In several instances insufficient data precludes an intelligent estimation of recoverable reserves and hence some allowance must be made. This is especially true of Elwood, Montebello and Kettleman Hills. At Elwood, the Sespe has been definitely proven as productive but the extent and thickness of the oil measure has not yet been determined due to restricted development. At Montebello and Kettleman Hills, excellent indications of the existence of deeper zones have been found but mechanical difficulties have prevented conclusive tests. In a few instances such as at Lost Hills-Belridge, Santa Maria and Ventura-Newhall, production data available does not permit a satisfactory segregation of each structure.

Annual Production

The accompanying table indicates rather conclusively that California should be able to produce at a rather high rate per day for several years without having to resort to unrestricted drilling. There were 11,007 wells producing at the end of June, 1934, and an additional 4,671 still remaining shut in. An additional 2,099 are standing suspended or undergoing remedial work. The quantity of production shown in the table as being shut in is considerably higher than conservative estimates and merely reflects the generally accepted figures as set up by the California oil umpire. One of the most interesting things brought out is that estimates indicate the probable recoverable reserves of the state are somewhat in excess of the total amount of crude produced up to the present time.

The Midway Field of Kern County still heads the list from a production standpoint with a total production to date of 596,614,434 bbls. and a remain-

CALIFORNIA CRUDE OIL PRODUCTION—PROBABLE ULTIMATE RECOVERY—AMOUNT SHUT IN

Northern Fields—	Proved acreage	Recovery per acre to date	Production June 30, 1934	Remaining to be recovered	Estimated ultimate recovery	Daily production— Current	Daily production— Shut in	Oil wells— Producing	Oil wells— Shut in	Oil wells— Idle
Coalinga	16,250	20,325	330,276,256	119,723,744	450,000,000	20,664	13,266	962	448	117
Elk Hills	4,850	26,901	130,467,444	69,532,556	200,000,000	8,562	10,373	189	126	5
Fruitvale	1,050	6,169	6,477,215	14,522,785	21,000,000	4,014	4,566	61	4	5
Kern River	8,250	35,727	294,747,985	105,252,015	400,000,000	10,878	10,942	1,240	1,098	272
Kettleman Middle Dome	1,150	188	215,987	114,784,013	115,000,000	204	96	1	.....	.....
Kettleman North Dome	16,370	4,846	79,322,899	1,557,677,101	1,637,000,000	61,149	341,111	69	18	.....
Lost Hills-Belridge	6,000	12,220	73,321,057	126,678,943	200,000,000	12,055	31,475	433	289	44
Maricopa	17,000	9,437	160,435,833	64,564,167	225,000,000	12,279	3,390	695	160	110
McKittrick	1,050	79,267	83,230,426	16,769,574	100,000,000	3,191	1,344	196	100	81
Midway	25,000	23,865	596,614,434	303,385,566	900,000,000	45,198	30,993	1,718	941	220
Mountain View	1,250	911	1,138,314	48,861,686	50,000,000	7,610	8,340	22	.....	.....
Mount Poso	1,500	10,900	16,350,265	103,649,735	120,000,000	10,599	22,721	134	26	4
Round Mountain	750	6,276	4,707,134	45,292,866	50,000,000	5,016	9,584	42	23	1
Wheeler Ridge	200	14,948	2,989,649	4,510,351	7,500,000	437	13	34	.....	.....
Total Northern	100,670	17,684	1,780,294,898	2,695,205,102	4,475,500,000	201,856	488,214	5,796	3,222	859
Coastal Fields—										
Capitan	100	1,815	181,562	4,818,438	5,000,000	573	847	8	3	.....
Elwood	550	87,346	48,040,080	76,959,920	125,000,000	11,613	31,227	51	12	7
Rincon	150	37,217	5,582,494	9,417,506	15,000,000	1,461	1,309	32	2	7
San Miguelito	250	3,248	812,077	14,187,923	15,000,000	691	2,054	3	.....	.....
Santa Barbara	75	8,943	670,691	1,829,309	2,500,000	996	704	17	.....	4
Santa Maria	7,500	17,399	130,489,190	94,510,810	225,000,000	5,466	12,459	172	222	30
Summerland	50	61,655	3,082,768	217,232	3,300,000	54	.....	22	.....	29
Ventura Avenue	1,450	101,129	146,636,881	143,363,119	290,000,000	26,796	43,489	161	74	55
Ventura-Newhall	4,500	11,499	51,747,672	23,252,328	75,000,000	4,027	1,883	462	83	239
Watsonville	75	18,175	1,363,143	136,857	1,500,000	60	.....	7	.....	.....
Total Coastal	14,700	26,436	388,606,558	368,693,442	757,300,000	51,737	93,972	935	396	371
Southern Fields—										
Brea Olinda	1,750	84,912	148,596,647	51,403,353	200,000,000	11,667	9,213	348	104	54
Coyote (East and West)	2,150	63,897	137,378,366	112,621,634	250,000,000	13,494	12,756	118	136	13
Domingues	750	88,600	66,449,707	158,550,293	225,000,000	20,225	32,965	64	52	16
Huntington Beach	2,100	99,995	209,990,196	105,009,804	315,000,000	47,440	66,860	449	165	138
Inglewood	875	103,204	90,303,292	259,696,708	350,000,000	9,496	6,144	193	56	9
Lawndale	50	17,570	878,492	371,508	1,250,000	157	.....	7	.....	1
Long Beach	1,700	302,242	513,810,574	186,189,426	700,000,000	72,270	34,990	1,058	112	257
Los Angeles	500	52,465	26,232,345	767,655	27,000,000	251	.....	135	.....	66
Montebello	1,100	85,444	93,988,526	126,011,474	220,000,000	5,451	2,574	172	13	16
Newport	.....	.....	129,019	20,981	150,000	.....	.....	.....	.....	14
Playa Del Rey	450	58,078	26,134,995	18,865,005	45,000,000	8,931	2,659	163	13	24
Potrero	50	36,851	1,841,559	658,441	2,500,000	412	223	11	3	7
Richfield	1,450	50,478	73,192,961	26,807,039	100,000,000	8,449	3,286	224	66	24
Rosecrans	500	57,649	28,824,404	11,175,596	40,000,000	2,915	1,405	73	16	21
Salt Lake	500	76,357	38,178,501	1,321,499	39,500,000	552	373	20	1	3
Santa Fe Springs	1,600	236,545	378,472,185	101,527,815	480,000,000	41,809	27,091	525	145	70
Seal Beach	350	192,027	67,209,514	32,790,486	100,000,000	10,040	8,646	112	31	11
Torrance	4,500	16,978	76,399,406	23,600,594	100,000,000	7,306	1,069	453	104	103
Whittier	600	26,790	16,073,802	4,426,198	20,500,000	1,095	27	151	26	22
Total Southern	20,975	95,670	1,994,084,491	1,221,815,509	3,215,900,000	261,963	211,275	4,276	1,043	869
Total state	136,345	30,532	4,162,985,947	4,285,714,053	8,448,700,000	515,556	793,461	11,007	4,671	2,099

ing amount of 303,385,566 bbls. still to be recovered. The Long Beach Field has produced 513,810,574 bbls. of crude up to date but appears to be well over the top with only 186,189,426 bbls. as a future expectancy. Other prolific California fields from a production standpoint include Santa Fe Springs with an output of 378,472,185 bbls.; Coalinga with 330,276,256 bbls.; Kern River with 294,747,985 bbls.; Huntington Beach with 209,990,196 bbls., and Maricopa with a cumulative production of 160,435,833 bbls. Belridge, Kettleman Hills, Mountain View, Elwood, Dominguez and Inglewood do not show the high rate of production of other fields due to restricted drilling and severe degree of curtailment imposed upon both by the curtailment committee and by previous mutual consent.

Kettleman Hills

The Kettleman North Dome Field has been given by far the largest amount of crude remaining to be recovered and the largest total ultimate recovery. Due to its importance, some may take exception to these figures for the North Dome and it might, therefore, be apropos to call attention to some data presented to a special committee by Carl Beal several months ago. Mr. Beal stated to the committee, which was meeting to recommend an equitable method of allocation for the field that, "the North Dome of Kettleman Hills contains 16,370 acres that is now considered to be the area proved up for production. The shape of the structure is an elongated dome which is narrow at the southeast end and broad and flaring out at the northwest end. It is steep on the southeast side, having dips of about 65 degrees in the Temblor formation, and relatively gentler over on the northeast side where the dips are about 35 degrees. The composition of the Temblor, as a rule, is composed of a series of sandstones and shales with varying porosity and apparently no particular shale breaks over the entire field.

"Porosity of the productive formations range from 3 per cent to 14 per cent, and a weighted average of the porosity is 11 per cent which means that 11 per cent of the Temblor is porous and in a condition to hold gas and fluids. Approximately 65 per cent of the Temblor formation has a porosity of 14 per cent. In other words, about 1,000 feet of formation is 14 per cent porous. Assuming porosity of 11 per cent throughout the formation, that will give us a porous content of 850 bbls. per acre foot, and with 1,500 feet, which is the average thickness of the formation, we have a porous content of 1,275,000 bbls. per acre. That sounds rather high but if we assume that one-half of the formation contains producible oil, it would give an oil content for the entire 16,370 acres of 10,000,000,000 bbls.

"In using the saturation method, we have to assume that part of the oil is recoverable and part is not, and we always say, that there will be about 25 per cent of that recoverable under present methods. If 25 per cent of this 10,000,000,000 bbls. is recoverable over a period of years, under present methods, we have an eventual or ultimate production of 2,500,000,000 bbls. Along with that we would have a tremendous amount of gas, and with an average gasoline content of this wet gas of 2 gallons, we would have 300,000,000 to 500,000,000 bbls. of natural gasoline coming along with the oil. Engineers, many of us, have figured recoveries on an acreage basis from 75,000 to 175,000 bbls. per acre. If we assume that the field will produce an average of 100,000 bbls. per acre, we will have 1,600,000,000 bbls. to come out."

Fuel Oil Demand

In determining the possibility of a shortage of crude oil within the next few years, attention must be given to the probable demand for crude and refined oil particularly in view of the fact that refiners will crack increased quantities of fuel oil and heavy crude if the available supply of refinable crude is not any too plentiful. It is not the intention to prognosticate the probable demand during the next several years as it is questionable whether any forecast prepared for more than one year in advance has any value except to indicate the possible trend unless it is continually revised at very frequent intervals. Demand in a given territory can be predicted with fair accuracy but in an area that ships crude and refined oils to other consuming areas it is almost impossible to predict futures very far ahead.

During the past year, California has moved a considerable quantity of fuel oil to the Atlantic Seaboard for domestic consumption in addition to the movement of gasoline and other commodities. This movement is due primarily to import restrictions from foreign ports and indicates quite clearly one of the variable factors that can change the picture within a short period. Due to the substantial amount of fuel oil moved to the Eastern Seaboard, this business has been an important factor in the determination of production and the allocation of refinery operations during 1934. No commitments have been made for 1935 and recent developments indicate a substantial decline in the movement of fuel oil from California to the Atlantic Seaboard during the coming year. If this business is lost by California marketers, it may result in a decreased allowable by the petroleum administrator as it will most certainly reduce the demand for crude oil.

The influence of California fuel oil on conditions along the Atlantic Seaboard during the next several years depends to a large extent on the recovery of business in general and the ability of consumers in that area to pay a price that will provide a fair return to producers and at the same time permit a normal return to marketers. Price advances in fuel oil quotations in the domestic markets of the Atlantic have had a tendency to induce commercial users to revert back from the use of fuel oil to coal. Existing fuel oil prices are not especially remunerative to California operators on the basis of 66 to 70 cents per barrel at California ports as this is just about equal to the posted price of heavy oil plus pipe line transportation costs to tidewater. The difference between fuel oil prices on the Atlantic Seaboard is due to transportation costs primarily. The future affect and amount of fuel oil to be moved from California to eastern markets, therefore, depends on the ability of consumers to pay a fair price and also whether consumers continue to use oil or revert back to coal. One thing appears certain and that is that the type of fuel oil in the future will be a blend of cracked residuum and straightrun although it may be another year or two before this becomes a reality.

Crude Oil Demand

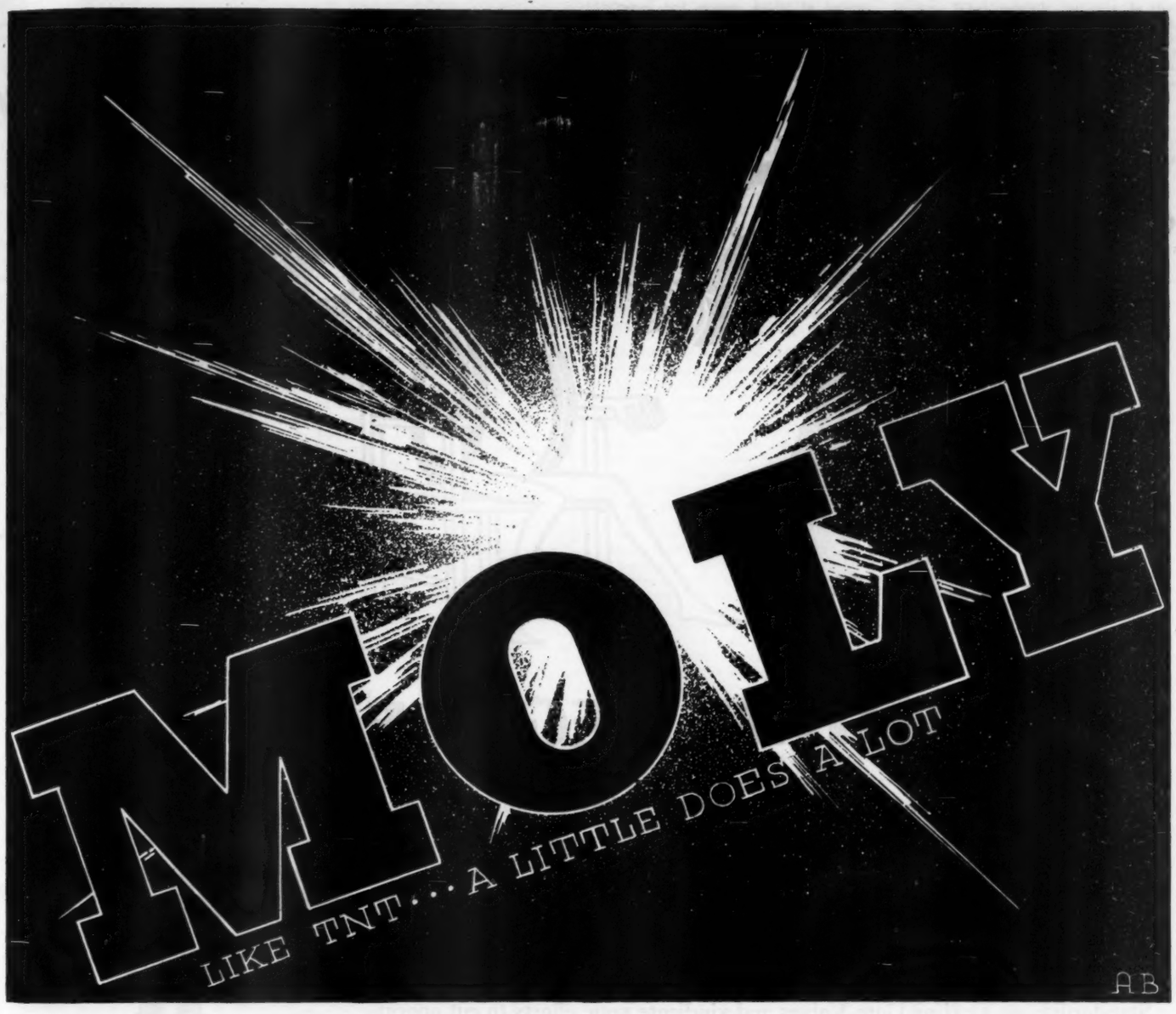
So much for the fuel oil situation. Now let us look at the possible demand for crude during the immediate future. California is able to produce approximately 250,000,000 bbls. of crude annually for several years without placing any undue hardship on operators from a drilling standpoint. The demand for crude, reflecting the demand for refined products, varies accordingly and for this reason it might not be amiss to call attention to some of the factors that might reduce the demand for California crude oil. California's most important consumers of refined oil in the foreign field are Japan, the Orient and South America. Refined oil has been shipped to other parts of the world but the principal markets are those just enumerated as developments indicate that California has practically lost its Atlantic foreign business and will suffer a further loss now that Iraq production has entered the general competitive market.

Since shipments of crude and fuel oil to foreign markets have been so important to California producers and refiners it might be apropos to call attention to the possibility that some of the Japanese business, which is an important outlet for California crude and fuel oil may be lost to other markets in the not far distant future. One of the principal potential sources of crude oil to meet the demand of Japan is at Bahrein Island where the Standard Oil Co. of California has developed commercial production and is well on the way toward stimulating additional production. Bahrein Island is further removed from Japan than California but the latter's nautical advantage of about 1,000 miles is more than offset by the fact that production of Bahrein Island is not at present restricted to any maximum quantity. Production costs are consequently low and the prices of crude should be comparatively lower.

Possible Isolation

If the United States loses a large part of its foreign markets, due to competitive conditions resulting from development of substantial production at Iraq and Bahrein Island, the demand of domestic markets along the Atlantic Seaboard for crude and refined oil will be substantially less. If such a situation develops, the demand for California products east of the Rockies will be correspondingly less provided production in Texas and the Mid-Continent area proves ample as present indications show. There is a strong possibility, due to a combination of circumstances, that California may find itself more or less isolated with respect to markets and, in such an event, the demand for crude will be far less than the average requirements during the past decade during which California operators have shipped large quantities of petroleum to Atlantic domestic markets as well as to foreign ports. Such a condition will preclude any possibility of a crude shortage in California despite numerous statements to this affect during the past several months.

View of Ventura Avenue Field, California



WHETHER it be toward the application of strength or the resistance to shock or wear, any added element which justifies its cost is usually welcome. "Moly" in iron or steel does more than that.

Example: A small amount of Molybdenum, when added to cast iron, will increase its wear-resistance to an extent that far outweighs the added cost. Note this comparison of wear, as measured on the Amsler Machine:

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Plain Iron	7.3 grams
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By the same token, Moly increases the strength (tensile and creep) of iron or steel. It reduces temper embrittlement—increases toughness, without loss of hardness. It actually enhances the characteristics of other alloys. Yet it makes for easier machinability, forging and welding. Paradoxical? It seems so. But Moly qualities are no longer theories. Instances without number have proved them.

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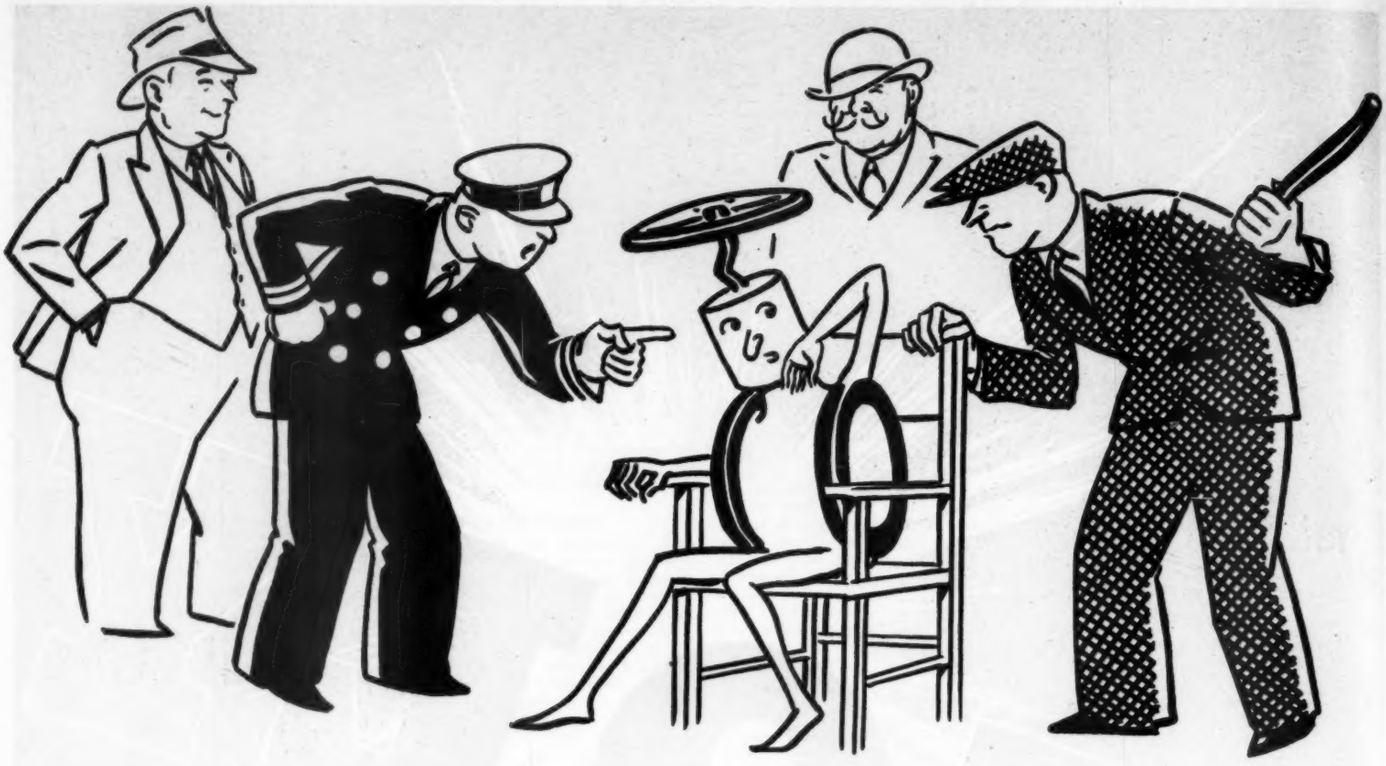

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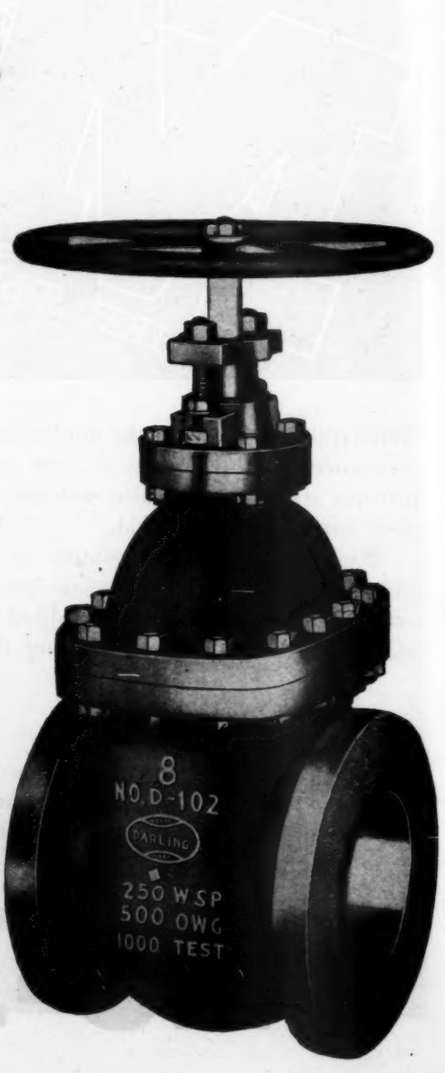

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Water Analysis and Treating Lessens Operating Problem

Water Treatment in Refineries

This is the third and last of a series of articles dealing with the subject of water in petroleum refining. The first article, which appeared in The Oil and Gas Journal, of June 7, 1934, discussed the chemical treatment of water before its utilization. The second, concerned with the disposal of water after use in refinery operation, appeared in the July 26, 1934, issue, page 50. In this article the author covers the chemistry of corrosion and metal embrittlement, and the treating of water for washing and drinking purposes.

Depending on the temperatures and pressures maintained, and on the content of boiler feedwater, the conditions encountered may range from dangerous explosions to slow depreciation. The factors leading to critical conditions are cited and discussed. These are supplemented by chemical equations of corrosion.

The cemistry involved in washing with common soap is shown and washing conditions in hard water are explained on this basis. Drinking water is also discussed from the standpoint of content and treatment. The article is accompanied by a diagram of a system for general water treatment.

By DANIEL IRWIN

In the treating or softening of water, the scale forming compounds are removed or neutralized in their effect; dissolved oxygen that causes corrosion of iron is removed; materials in suspension and in colloidal form, that cause foaming are removed by coagulation and filtering. However, depending on operating conditions of the steam generator, with certain pressures and temperatures and with mineral salts present or not present, corrosion and embrittlement of steel (iron) will occur. The damage caused may range from disastrous explosions to orderly shutdowns due to failure or to rapid or slow depreciation of equipment.

To prevent or inhibit damage caused by corrosion and embrittlement of metal in steam generators, boiler compounds are used, introduced directly into the feed water. The most orthodox is the U. S. Navy Boiler Compound[1]:

Material—	Per cent by wt.
Soda ash, Na_2CO_3	77
Tri-sodium phosphate, $Na_3PO_4 12H_2O$	10
Tannin (tannic acid)	2
Starch; potato	1
Water	10

The merits and functions of this and other compounds have been the subject of many papers and discussions and will not be considered in this article.

The writer risks criticism in grouping the corrosion and what is commonly called "caustic embrittlement" by suggesting that the formation of hydroxyl radical, OH, however obtained, either by dissociation of water, by ionization of water or by the hydrolizing of sodium carbonate, or other salts in solution, could form the ferrous hydroxide and then the ferroso-ferric oxide with the iron of the tubes or shell of the steam boiler.

Critical Conditions

Critical conditions must exist before corrosion takes place to an extent that demands prompt attention. These conditions may be set up in any steam generator or boiler regardless of the normal operating pressures or temperatures of the steam. Corrosion is particularly a problem with pressures of 300 pounds gauge and higher, and in steam generators having integral superheaters of the radiant and of the convection types. Where the problem applies to lower pressures and temperatures than that met with in high pressure and superheated steam installations, is in starting up and in low water situations, when high metal temperatures and low velocities of steam occur.

Damage from corrosion to steel (iron) tubes occurs in a matter of hours and not days or weeks, as may be supposed.

Fellows[2] proposes the following reaction:

$$3\,Fe + 4\,H_2O \longrightarrow Fe_3O_4 + 4\,H_2$$
(Ferroso-ferric oxide)

obtaining the free hydrogen and the black oxide of iron in extensive laboratory tests. He reports, for temperatures: No reaction at 700° F., slight formation of hydrogen at 1,000° F., and rapid reaction at 1,200° F., the temperature being the average of the steel tube and not of the steam. For the velocities of the steam in the tube: No reaction at 50 feet per second, some reaction at 1.4 feet per second, and rapid reaction at 0.4 foot per second.

Larson[3] discusses causticity in boilers, giving a probable reaction of sodium carbonate, in solution with the feed water:

$$Na_2CO_3 + 2\,H_2O \longrightarrow 2\,NaOH + H_2O + CO_2$$

but he does not go into the effect on steel tubes.

Mumford[4] reports the results of tests showing the presence of the hydroxyl radical in superheated steam, using distilled water. Keeth[5] presents a paper in which it is stated that in tests on a boiler installation for high pressure and high temperature, the radiant superheater tubes of steel were designed for 250° F. superheat, but in operation, only 125° F. was obtained. With the tube temperature of 1,200° F., the life of certain tubes were but a few days.

The writer has calculated the endothermic reaction in the dissociation of steam, with certain conditions, and at 300 pounds gauge pressure and a steam temperature of the order of 1,200° F. to 1,250° F., dissociation should take place. The assumption of the calculation is that hydrogen and oxygen would be formed. The formation of the hydroxyl, OH, was not included. A reasonable assumption might be:

$$H_2O + \text{heat} \longrightarrow H.OH \longrightarrow H_2 + 1/2O_2$$

Consistent with and summarizing the above, it may be stated that, regardless of how the hydroxyl, OH, is obtained, whether by dissociation of steam or by hydrolysis of salts in the water, there is a series of reactions with the iron of the tube giving the spongy ferrous hydroxide and then the hard and insoluble ferroso-ferric oxide as follows:

(1) $2Fe + 4H.OH \longrightarrow 2Fe(OH)_2 + 2H_2$
(2) $Fe + 2Fe(OH)_2 \longrightarrow Fe_3(OH)_4$*
(3) $Fe_3(OH)_4 \longrightarrow Fe_3O_4 + 2H_2$

*The theoretical hydroxide being extremely unstable.

Reaction (1) would be indicated in the laboratory tests (2) as a rapid formation of hydrogen, and then a more slow formation of hydrogen by (3). The writer has observed superheater sections in boilers that could not develop the designed superheat. This could be due to two possible causes: that the heat loss in the steam was taken by the endothermic reaction of the dissociation of the steam, and that the formation of the hydroxide (or oxide) reduced the heat transfer rate of the tubes of the superheater.

Regardless of the theory in cases where by heating of the steel tubes of a steam generator or boiler shell, steam is brought to a temperature of over 1,000° F. there can be dangerous corrosion. Possibly at lower temperatures of the steam, caustic may be formed and this caustic will have the sodium or other salt replaced with iron from the tube or shell, causing corrosion.

Overheating

Further, corrosion conditions may be set up by accident in any steam generator or boiler by overheating of the metal with slow velocity of steam, as in starting up. The damage may be caused in a very short period of time. Overheating may be caused in regions not subject to ordinary high temperature of the combustion chamber, by after-combustion in the convection sections of a furnace. Again, the corrosion can take place on the outside of the tube or shell, acting with the steam in the combustion gases. This latter corrosion takes place over a period of time.

The matter of corrosion and embrittlement would apply to tube or shell stills for oils. Calorizing (aluminum coating) of the inside and outside of tubes for steam generators and oil tube stills is one method of inhibiting corrosion. Special alloys of steel or other metals or alloys than steel might be effective.

Water for Washing

Of some interest is the necessity of soft water for washing purposes in the refinery. Besides an economy of soap, and the linking of safety with cleanliness of personnel, there is the matter of comfort of workmen.

The chemistry of washing may fairly be included in the literature of petroleum refining. Common soap is made of lye and fats, of the following composition:

$$C_3H_5(O.CO.C_{17}H_{35})_3 + 3KOH =$$
(stearate) (lye)

$$3C_{17}H_{35}CO_2K + C_3H_5(OH)_3$$
(potassium stearate) (glycerol)

When water is added as in washing, the water is ionized and forms an amount of caustic that is capable of combining as in the original manufacture, with fats bearing dirt; the dirt being thrown down and washed away with water:

$$C_{17}H_{35}CO_2K + H.OH =$$
(potassium stearate) (ionized water)

$$C_{17}H_{35}CO_2H + KOH$$
(stearic acid) (caustic)

In a hard water, calcium or sodium displaces the potassium of the soap, forming an insoluble and there should be no ionizing of the water, and no cleansing action. What actually happens is that with only slightly hard or brackish water, so much of the calcium or sodium is taken up as would soften the water and the cleansing would then proceed with waste of soap. In salt water cleansing would be impossible.

Water for Drinking

A small but important part of the water used by the refinery is drinking water, but the necessity of a good water for this purpose is as important as any other requirement for refinery water. Often where the general water supply is unsuitable for drinking, a separate system is installed for that purpose. Water to be palatable must contain minerals; to be potable it must be safe from harmful bacteria; have a conventional color and be free of unpleasant taste and odor.

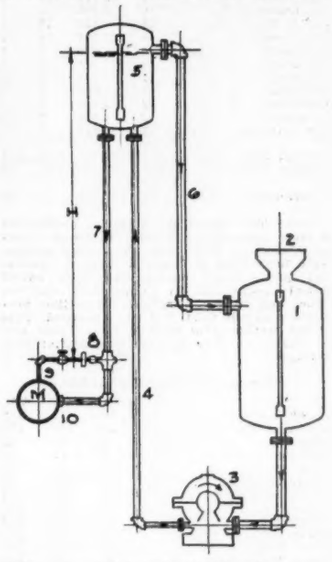

Fig. 1—A chemical charging system used for introducing a solution into a main M. This is applicable to water treatment, whether for process use or for sanitary purposes. The essential parts are: A solution mixing tank 1, with means of adding the chemical components either in batch or continuously 2, a circulating pump 3 that maintains a constant head through lines 4 and 6, in the gravity tank 5. The feed line 7 is at constant head H, on the flow controller 8, this flow being regulated by various means: Orifice plates in the main M, or otherwise, at any point 9. With pressure in the main exceeding the head H, a hydraulic ejector might be used at 10. Meters, sample lines, thermometers, and pressure gauges should be included in the instrument equipment.

The health giving elements;, calcium, phosphorus, potassium, sodium, chlorine, magnesium, iron, copper, manganese and fluorine—all found in foods, are essential and may be found in water. The principal of these elements are shown in the typical analysis of a soft water reported in a previous article. Oxygen, carbon dioxide and sodium compounds give taste; calcium and magnesium bicarbonate give flavor and heaviness to water. Magnesium sulphate, or epsom salts, may or may not be classified as agreeable, but is a desirable property. Absence of some substances, such as carbon dioxide and the nitrogen compounds might indicate polluted water, as would an absence of temporary hardness. Such water may contain incompletely digested sewage with injurious alcohols.

Color is undesirable but not harmful. It might be due to tannins and dyes from decaying bark and leaves; water may be clear on treating and after storage become stained or turbid from iron hydroxide formed on aeration.

Algae, diatoms and minute animal life

(Continued on Page 64)

Summary of Operations in All Fields for August, 1934

SUMMARY OF WELLS COMPLETED

	Comp.	Prod.	Dry	Gas
Penna. Grade fields	253	2,067	18	36
Central Ohio	86	455	15	49
Lima	3	98	2	1
Indiana	14	151	2	5
Illinois	1	0	1	0
Kentucky	56	2,870	16	2
Michigan	37	9,403	7	5
Kansas	93	29,453	24	1
Oklahoma	152	69,383	49	3
North Central Texas	166	8,486	58	4
West Texas	60	15,039	13	0
Texas Panhandle	62	22,944	0	6
East Central Texas	21	554	8	1
East Texas	362	19,226	5	0
East Texas gas area	1	0	0	1
Gulf Coast, Texas	88	32,175	27	4
Southwest Texas	70	8,385	32	4
North Louisiana	35	736	16	5
Gulf Coast, La.	44	22,797	15	2
Arkansas	11	225	9	0
Mississippi	4	0	3	1
Alabama	2	0	2	0
Montana	4	1,005	0	0
Wyoming	29	2,449	5	3
Colorado	3	1,680	2	0
New Mexico	11	21,827	2	0
Total Aug.	1,673	371,408	361	139
Total July	1,625	415,328	375	93
Difference	48	143,920	14	36

Note—The "decline" in initial production is more apparent than real. In Pecos County, Texas, in the past, short-time gauges were multiplied to make a 24-hour "potential production," which has been called initial production. In August this was not done, and only the actual short-time production on the first day was recorded. This is the method also used in East Texas and in Oklahoma City in recording initial production.

RIGS AND WELLS DRILLING

	Rigs	Drlg.	Ttl.
Penna. Grade fields	68	213	281
Central Ohio	32	140	172
Lima	2	33	35
Indiana	1	43	44
Illinois	2	13	15
Kentucky	2	39	41
Michigan	108	129	237
Kansas	34	155	189
Oklahoma	80	433	513
North Central Texas	58	185	244
West Texas	55	176	231
Texas Panhandle	33	145	178
East Central Texas	11	54	65
East Texas	41	239	280
East Texas Gas area	2	15	17
Gulf Coast, Texas	52	172	224
Southwest Texas	46	144	190
North Louisiana	34	84	118
Gulf Coast, Louisiana	22	92	114
Arkansas	7	34	41
Mississippi	6	10	16
Alabama	1	2	3
Montana	19	73	92
Wyoming	10	63	73
Colorado	4	30	34
New Mexico	11	72	83
Utah	1	14	15
Total August	743	2,803	3,545
Total July	815	2,751	3,566
Difference	73	52	21

Oklahoma Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	30	20,381	8	0
Noble	9	15,178	2	0
Creek	23	2,366	8	1
Okmulgee	9	424	4	1
Muskogee	4	70	2	0
Kay	1	0	1	0
Oklahoma	3	5,579	0	0
Tulsa	3	10	2	0
Wagoner	1	0	1	0
Pawnee	1	0	1	0
McIntosh	1	0	1	0
Seminole	12	4,986	2	1
Hughes	5	1,030	0	0
Pottawatomie	6	2,579	0	0
Grady	2	0	2	0
Pontotoc	12	12,956	3	0
Marshall	4	45	1	0
Stephens	9	34	3	0
Carter	6	75	4	0
Lincoln	4	3,462	1	0
Jefferson	4	143	1	0
McClain	1	0	1	0
Okfuskee	2	65	1	0
Total August	152	69,383	49	3
Total July	138	48,862	38	3
Difference	14	20,521	11	0

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Atoka	0	11	11
Carter	2	13	15
Stephens	1	13	14
Murray	0	3	3
Johnston	0	1	1
Pushmataha	0	1	1
Jefferson	2	11	13
Marshall	0	8	8
Choctaw	0	1	1
Pontotoc	7	40	47
Comanche	0	7	7
Jackson	0	4	4
Garvin	0	2	2
Pittsburg	0	3	3
Grady	0	1	1
McClain	0	1	1
Pottawatomie	8	43	51
Hughes	3	16	19
LeFlore	0	1	1
Caddo	0	3	3
Seminole	3	28	31
Latimer	0	1	1
Kiowa	0	2	2
Greer	0	1	1
Washita	0	1	1
Beckham	0	3	3
Cleveland	0	3	3
Washita	2	1	3
Okfuskee	4	14	18
Oklahoma	7	26	33
Okmulgee	3	16	19
Lincoln	3	14	16
Muskogee	0	2	2
Logan	2	11	13
Creek	7	41	48
Kingfisher	0	2	2
Tulsa	0	4	4
Blaine	0	1	1
Payne	0	2	2
Pawnee	1	4	5
Noble	2	12	14
Ellis	0	1	1
Osage	19	56	75
Garfield	1	2	3
Alfalfa	1	0	1
Harper	0	1	1
Kay	1	1	2
Grant	2	0	2
Total August	80	433	513
Total July	93	393	486
Difference	13	40	27

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Rice	14	7,594	3	0
Barton	1	45	0	0
Russell	5	1,740	1	0
McPherson	9	1,425	2	0
Harvey	11	4,150	1	1
Reno	9	6,246	1	0
Rush	1	153	0	0
Ellis	1	195	0	0
Rooks	1	44	0	0
Kingman	1	141	0	0
Sedgwick	8	2,715	3	0
Marion	1	127	0	0
Chase	1	160	0	0
Greenwood	10	61	6	0
Sumner	1	0	1	0
Cowley	1	0	1	0
Butler	10	321	5	0
Chautauqua	1	100	0	0
Woodson	1	15	0	0
Ellsworth	6	4,121	0	0
Total August	93	29,453	24	1
Total July	90	21,190	22	1
Difference	3	8,263	2	0

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Rooks	0	2	2
Osborne	0	1	1
Trego	0	2	2
Russell	10	11	21
Ellsworth	1	2	3
Dickinson	0	1	1
Barton	0	5	5
McPherson	3	17	20
Rush	0	2	2
Rice	4	23	27
Ellis	0	1	1
Scott	0	1	1
Stafford	0	6	6
Harvey	3	7	10
Reno	6	21	27
Butler	0	16	16
Sedgwick	4	18	22
Kingman	0	2	2
Harper	0	1	1
Barber	0	2	2
Sumner	0	3	3
Elk	0	6	6
Cowley	3	5	8
Total August	34	155	189
Total July	31	171	202
Difference	3	16	13

East Central Texas Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Anderson	11	385	2	0
Cherokee	1	0	1	0
Franklin	2	0	2	0
Freestone	2	0	1	1
Gregg	158	8,999	2	0
Hunt	0	0	0	0
Rusk	136	7,269	0	0
Smith	21	1,183	0	0
Upshur	46	1,774	2	0
Van Zandt	6	169	3	0
Wood	0	0	0	0
Total August	383	19,780	13	1
Total July	319	17,323	10	1
Difference	64	2,457	3	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Anderson	3	0	9	12
Cherokee	1	3	3	7
Ellis	1	1	1	3
Fannin	0	1	0	1
Freestone	2	2	1	5
Gregg	23	0	121	144
Henderson	1	2	1	4
Hopkins	0	1	0	1
Houston	0	1	0	1
Hunt	0	2	0	2
Kaufman	0	0	1	1
Lamar	0	1	0	1
Leon	0	0	2	2
Limestone	1	1	3	5
Morris	1	2	0	3
Nacogdoches	0	1	1	2
Navarro	1	3	2	6
Rains	0	1	0	1
Red River	0	2	0	2
Rusk	15	3	69	87
Smith	2	1	11	14
Upshur	0	3	25	28
Van Zandt	1	6	5	12
Wood	0	1	0	1
Total August	52	38	255	345
Total July	66	52	258	376
Difference	14	14	3	31

North Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Archer	50	3,569	20	0
Brown	1	0	1	0
Callahan	0	0	0	0
Clay	2	60	1	0
Coleman	5	0	4	1
Cooke	2	0	2	0
Eastland	6	20	3	2
Grayson	2	0	2	0
Jack	9	0	9	0
Montague	5	300	4	0
Palo Pinto	2	0	1	1
Shackelford	25	735	14	1
Taylor	0	0	0	0
Wichita	6	165	4	0
Wilbarger	21	2,674	8	0
Young	30	963	15	0
Total August	166	8,486	88	4
Total July	239	26,911	88	2
Difference	73	18,425	0	2

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	26	14	21	61
Baylor	1	0	0	1
Brown	2	3	5	10
Callahan	0	2	7	9
Clay	0	1	0	1
Coleman	5	4	1	10
Comanche	0	3	1	4
Cooke	0	4	3	7
Denton	0	1	0	1
Eastland	1	2	5	8
Erath	0	0	1	1
Fannin	0	1	0	1
Foard	0	0	2	2
Haskell	0	1	0	1
Hamilton	0	0	1	1
Jack	3	4	7	14
Johnson	0	1	0	1
Lampasas	0	1	0	1
Montague	3	1	3	7
Palo Pinto	0	2	3	5
Parker	0	2	0	2
Shackelford	2	1	9	12
Stephens	0	1	5	6
Stoneweall	0	0	1	1
Throckmorton	0	2	2	4
Wichita	2	5	8	15
Wilbarger	6	5	11	22
Wise	0	1	0	1
Young	8	2	25	35
Total August	58	65	121	244
Total July	87	102	115	304
Difference	29	37	6	60

West Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Andrews	2	16	1	0
Crockett	1	0	1	0
Ector	4	1,318	1	0
Fisher	1	550	0	0
Glasscock	5	1,272	1	0
Howard	6	2,934	0	0
Irion	1	0	1	0
Jones	6	242	2	0
Loving	2	210	0	0
Reeves	0	0	0	0
Pecos	5	*1,562	2	0
Runnels	1	228	1	0
Tom Green	1	0	1	0
Upton	3	437	0	0
Ward	17	5,444	2	0
Winkler	5	826	0	0
Total August	60	15,039	13	0
Total July	37	109,159	7	2
Difference	23	91,420	6	2

*Initial production, one-hour gauge. No record of total 24-hour production.

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Andrews	2	1	3	6
Borden	0	0	0	0
Brewster	0	0	1	1
Coke	1	0	0	1
Crane	1	2	1	4
Culberson	0	2	1	3
Dawson	0	1	0	1
Ector	6	3	14	23
El Paso	0	1	1	2
Fisher	3	0	12	15
Glasscock	3	7	7	17
Howard	4	4	10	18
Irion	0	2	0	2
Jones	3	4	6	13
Loving	1	1	5	7
Menard	0	1	0	1
Mitchell	2	0	2	4
Pecos	9	11	5	25
Presidio	0	1	0	1
Reagan	0	1	2	3
Reeves	0	1	2	3
Runnels	2	2	6	10
Schleicher	0	1	1	2
Scurry	0	1	2	3
Taylor	0	0	2	2
Terrell	0	0	2	2
Upton	0	0	0	0
Val Verde	0	0	0	0
Ward	12	14	11	37
Winkler	6	2	14	22
Total August	55	63	113	231
Total July	54	48	76	178
Difference	1	15	37	53

Texas Panhandle

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Carson	10	765	0	1
Gray	25	8,613	0	2
Hutchinson	4	1,083	0	0
Moore	2	400	0	0
Wheeler	21	12,083	0	1
Total August	62	22,944	0	4
Total July	73	30,498	1	3
Difference	11	7,554	1	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	5	0	10	15
Childress	1	0	1	2
Collingsworth	0	0	1	1
Dallam	0	1	0	1
Gray	12	5	55	72
Hemphill	0	1	0	1
Hutchinson	6	0	26	32
Moore	0	0	2	2
Randall	0	1	0	1
Wheeler	9	5	37	51
Total August	33	13	132	178
Total July	40	41	103	184
Difference	7	28	29	6

Southwest Texas Fields

Summary of Field Operations

Field—	Comp.	Prod.	Dry Gas	Rigs	Drg.	Ttl.
Angelita	2	16	1 0	0	1	1
Aqua Dulce	1	320	0 0	2	3	5
Caesar	1	1,250	0 0	1	1	2
West Cole	1	480	0 0	5	4	9
Cuevitas	1	0	1 0	0	1	1
Von Ormy	1	0	0 1	0	0	0
North Dale	1	0	1 0	1	2	3
Darst Creek	1	22	0 0	0	0	0
Driscoll	1	200	0 0	0	0	0
Gov. Wells	22	3,479	4 1	6	4	10
Jacobs	2	0	2 0	1	7	8
Jennings	1	50	0 0	0	1	1
Kingsville	2	0	2 0	0	1	1
Las Escobas	1	30	0 0	0	0	0
Los Olmos	2	0	1 1	0	0	0
Lucas	1	45	0 0	0	1	1
West Lucas	1	300	0 0	0	0	0
North Pettus	5	677	0 1	1	2	4
Sarnosa	1	0	1 0	0	0	0
Sinton	1	50	0 0	1	2	3
West Tuleta	2	1,485	0 0	3	3	6
Miscellaneous	19	0	19 0	24	111	135
Total Aug.	70	8,385	32 4	46	144	190
Total July	94	7,266	45 5	31	120	151
Difference	24	1,119	14 1	15	24	39

Gulf Coast Fields

TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry Gas	Rigs	Drg.	Ttl.
Ace	0	0	0 0	1	0	1
Arriola	0	0	0 0	1	2	3
Barbers Hill	6	1,924	0 0	4	14	18
Blue Ridge	1	100	0 0	0	2	2
Boling	1	660	0 0	0	1	1
Buckeye	0	0	0 0	0	2	2
Clay Creek	1	150	0 0	1	1	2
Cleveland	0	0	0 0	0	1	1
Coletto Creek	4	460	1 0	2	3	5
Conroe	10	10,836	0 0	1	8	9
Damon Mound	0	0	0 0	0	2	2
Danbury	0	0	0 0	0	2	2
Dayton	0	0	0 0	1	0	1
Esperson	1	0	0 1	0	2	2
Fannett	0	0	0 0	0	1	1
Goose Creek	0	0	0 0	1	2	3
Greta	7	1,705	1 1	3	16	19
Hankamer	1	0	1 0	0	1	1
High Island	0	0	0 0	2	5	7
Hull	3	350	1 0	1	5	6
Humble	1	0	1 0	0	1	1
Keeran	0	0	0 0	0	2	2
Liberty	1	0	1 0	0	2	2
Livingston	3	80	2 0	1	1	2
Louise	2	290	1 0	1	1	2
Manvel	5	2,511	1 0	2	8	10
McFaddin-O'Connor	0	0	0 0	0	3	3
Markham	0	0	0 0	0	3	3
Mykawa	1	0	1 0	0	0	0
Orange	0	0	0 0	1	1	2
Orchard	0	0	0 0	0	1	1
Pierce Jct.	2	1,064	0 0	1	6	7
Pledger	1	0	1 0	1	1	2
Port Neches	0	0	0 0	0	2	2
Raccoon Bend	2	2,278	0 0	0	3	3
Refugio	4	1,286	0 0	0	4	4
Sour Lake	4	1,175	1 0	1	0	1
Saratoga	1	30	0 0	0	0	0
Stratton Ridge	0	0	0 0	0	1	1
Thompson	3	2,400	0 0	4	2	6

(Continued on Next Page)

Tomball	8	4,176	0	2	4	7	11
Vanderbilt	0	0	0	0	2	3	5
Van Vleck	0	0	0	0	0	1	1
West Columbia	0	0	0	0	0	2	2
Miscellaneous	14	0	14	0	16	47	63
Total Aug.	88	32,175	27	4	52	172	224
Total July	130	42,521	48	1	48	167	215
Difference	42	10,346	21	3	4	5	9

LOUISIANA

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bay Junop	0	0	0	0	0	1	1
Bay St. Elaine	0	0	0	0	0	2	2
Black Bayou	1	432	0	0	0	2	2
Bosco	1	0	1	0	5	6	11
Caillou Island	1	1,998	0	0	0	1	1
Cameron Meadows	2	0	2	0	0	3	3
Choctaw	1	890	0	0	0	1	1
Dog Lake	1	0	1	0	0	0	0
Edgerly	0	0	0	0	0	2	2
Garden Island	1	0	0	1	0	0	0
Gueydan	0	0	0	0	0	1	1
Hackberry	3	740	1	0	2	8	10
Iowa	7	5,759	1	0	1	4	5
Jennings	0	0	0	0	0	1	1
Lake Barre	1	1,886	0	0	1	4	5
Lake Pelto	0	0	0	0	0	1	1
Leesville	6	7,196	1	0	5	10	15
Lockport	3	1,050	0	0	0	4	4
New Iberia	1	720	0	0	1	1	2
Port Barre	1	0	1	0	0	1	1
Roanoke	0	0	0	0	0	3	3
Sorrento	0	0	0	0	0	1	1
Sulphur	5	1,951	1	0	1	6	7
Sweet Lake	0	0	0	0	0	2	2
Vinton	4	175	1	1	1	5	6
White Castle	0	0	0	0	0	1	1
Miscellaneous	5	0	5	0	5	21	26
Total Aug.	44	22,797	15	2	22	92	114
Total July	36	23,176	14	1	26	93	119
Difference	8	379	1	1	4	1	5

Gulf Coast

Total Aug.	132	54,972	42	6	74	264	338
Total July	166	65,697	58	2	74	260	334
Difference	34	10,725	16	4	0	4	4

Louisiana Fields

Summary of Field Operations

	Comp.	I.P.	Dry	*Gas	Rigs	Drg.	Ttl.
Avoyelles	0	0	0	0	0	2	2
Bienville	0	0	0	0	1	1	2
Bossier	8	203	1	0	2	9	11
Caddo	6	20	4	1	3	17	20
Caldwell	0	0	0	0	0	2	2
Concordia	0	0	0	0	0	1	1
DeSoto	1	25	0	0	1	13	14
East Carroll	0	0	0	0	0	1	1
Franklin	0	0	0	0	1	0	1
Grant	0	0	0	0	0	1	1
Morehouse	1	0	0	1	0	1	1
Natchitoches	1	0	1	0	1	5	6
Ouachita	3	0	0	3	1	3	4
Rapides	1	0	1	0	5	1	6
Red River	1	0	1	0	1	3	4
Richland	0	0	0	0	1	0	1
Sabine	11	488	6	0	13	21	34
Union	0	0	0	0	1	1	2
Vernon	0	0	0	0	1	0	1
Webster	1	0	1	0	2	2	4
Winn	1	0	1	0	0	0	0
Total Aug.	35	736	16	5	34	84	118
Total July	36	304	24	3	28	87	115
Difference	1	432	8	2	6	3	3

*Gas production: Caddo, 1,500,000; Morehouse, 17,000,000; Ouachita, 37,150,000; total, 55,650,000 feet.

Arkansas Fields

Summary of Field Operations

	Comp.	I.P.	Dry	Gas	Rigs	Drg.	Ttl.
Bradley	0	0	0	0	1	0	1
Calhoun	1	0	1	0	0	0	0
Columbia	0	0	0	0	0	1	1
Conway	1	0	1	0	0	0	0
Hempstead	0	0	0	0	0	4	4
Jefferson	1	0	1	0	0	0	0
Lafayette	1	0	1	0	1	4	5
Lee	1	0	1	0	0	0	0
Little River	0	0	0	0	0	2	2
Lonoke	0	0	0	0	0	1	1
Miller	3	150	2	0	1	9	10
Nevada	0	0	0	0	1	1	2
Ouachita	0	0	0	0	0	6	6
Poinsett	0	0	0	0	0	1	1
St. Francis	0	0	0	0	0	1	1
Union	3	75	2	0	3	4	7
Total Aug.	11	225	9	0	7	34	41
Total July	9	710	4	0	9	34	43
Difference	2	485	5	0	2	0	2

East Texas Border Counties

Summary of Field Operations

	Comp.	I.P.	Dry	*Gas	Rigs	Drg.	Ttl.
Cass	1	0	0	1	0	2	2
Harrison	0	0	0	0	0	2	2
Marion	0	0	0	0	0	2	2
Panola	0	0	0	0	2	4	6
Shelby	0	0	0	0	0	5	5
Total Aug.	1	0	0	1	2	15	17
Total July	2	0	2	0	1	14	15
Difference	1	0	2	1	1	1	2

*Gas production: Cass, 55,000,000 feet.

Mississippi Fields

Summary of Field Operations

	Comp.	I.P.	Dry	*Gas	Rigs	Drg.	Ttl.
Amite	0	0	0	0	0	1	1
Clarke	0	0	0	0	0	1	1
Hinds	1	0	0	1	0	1	1
Issequena	1	0	1	0	0	0	0
Jones	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	1	0	1
Madison	1	0	1	0	0	0	0
Monroe	0	0	0	0	1	0	1
Rankin	1	0	1	0	0	2	2
Scott	0	0	0	0	1	0	1
Simpson	0	0	0	0	1	1	2
Walthall	0	0	0	0	1	0	1
Warren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Winston	0	0	0	0	1	0	1
Total Aug.	4	0	3	1	6	10	16
Total July	2	0	2	0	6	12	18
Difference	2	0	1	1	0	2	2

*Gas production: Hinds, 40,600,000 feet.

Alabama Fields

Summary of Field Operations

	Comp.	I.P.	Dry	Gas	Rigs	Drg.	Ttl.
Baldwin	1	0	1	0	0	0	0
Clarke	1	0	1	0	0	0	0
Houston	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Pike	0	0	0	0	1	0	1
Total Aug.	2	0	2	0	1	2	3
Total July	0	0	0	0	0	4	4
Difference	2	0	2	0	1	2	1

Rocky Mountain Area

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Horn	1	350	0	0	0	1	1
Carbon	1	0	1	0	0	3	3
Fergus	0	0	0	0	0	3	3
Glacier	18	1,774	3	1	7	21	28
Liberty	0	0	0	0	0	3	3
Petroleum	0	0	0	0	0	2	2
Phillips	1	0	0	1	0	4	4
Pondera	1	0	1	0	1	0	1
Teton	0	0	0	0	0	3	3
Toole	7	325	0	1	2	14	16
Miscellaneous	0	0	0	0	0	9	9
Total Aug.	29	2,449	5	3	10	63	73
Total July	19	1,994	4	1	11	60	71
Difference	10	455	1	2	1	3	2

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Horn	0	0	0	0	4	6	10
Carbon	0	0	0	0	1	5	6
Converse	0	0	0	0	1	6	7
Crook	0	0	0	0	0	7	7
Fremont	0	0	0	0	0	6	6
Hot Springs	1	475	0	0	0	1	1
Lincoln	0	0	0	0	0	4	4
Natrona	0	0	0	0	3	6	9
Niobrara	0	0	0	0	0	3	3
Park	1	450	0	0	1	6	7
Sublet	0	0	0	0	0	6	6
Uinta	0	0	0	0	0	6	6
Sweetwater	0	0	0	0	1	2	3
Washakie	0	0	0	0	2	1	3
Weston	2	80	0	0	6	4	10
Miscellaneous	0	0	0	0	0	4	4
Total Aug.	4	1,005	0	0	19	73	92
Total July	5	22	2	1	41	64	78
Difference	1	983	2	1	5	9	14

UTAH

Summary of Field Operations

Total August	0	0	0	0	1	14	15
Total July	0	0	0	0	1	14	15
Difference	0	0	0	0	0	0	0

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Elbert	0	0	0	0	0	2	2
Grand	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	2	2
Larimer	0	0	0	0	0	4	4
Moffat	1	1,680	0	0	1	2	3
Park	0	0	0	0	0	2	2
Routt	2	0	2	0	1	1	2
Weld	0	0	0	0	0	1	1
Miscellaneous	0	0	0	0	2	14	16
Total Aug.	3	16,80	2	0	4	30	34
Total July	2	3,034	1	0	2	32	34
Difference	1	1,354	1	0	2	2	0

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Eddy	4	37	2	0	0	10	10
Lea	5	21,606	0	0	7	42	31
McKinley	0	0	0	0	1	5	6
San Juan	2	184	0	0	1	14	15
San Miguel	0	0	0	0	0	3	3
Santa Fe	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	2	10	12
Total Aug.	11	21,827	2	0	11	72	83
Total July	13	36,101	4	0	19	61	80
Difference	2	14,274	2	0	8	11	3

Central Ohio Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	6	11	0	3	2	7	9
Medina	7	12	1	4	7	5	12
Lorain	2	0	0	2	2	7	9
Holmes	3	0	1	2	2	6	8

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ECONOMY

Dependable Lubrication

The Bottle Oiler finds ready application in virtually every industry for the lubrication of shafting and bearings.

It feeds only when the shaft is in motion, uniformly distributing the right amount of oil for efficient lubrication. It provides a dependable supply of oil for long periods of time and eliminates oil waste and time lost by hand oiling.

The "Alvor" is designed to automatically maintain a constant oil level in ring oiled bearings or anti-friction bearings suitable for oil bath lubrication.

It insures against failure of oil supply and consequent costly shutdown of equipment. Oil waste is eliminated as it feeds only enough oil to maintain the required constant level in the bearing.

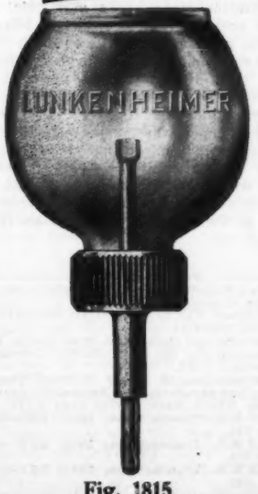

Fig. 1815
Bottle Oiler

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May we send the "Alvor" booklet No. 595?

Fig. 1834 "Alvor"
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so *you* won't have to

THE following parts of Mason-Neilan Regulators and Instruments are made of bright, non-corrosive 18-8 stainless steel:

Valve stems . . . ball bearings . . . stuffing box parts . . . balance valve linkages . . . pilot valve internal parts . . . float chamber internal parts . . . and numerous small instrument parts.

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LOS ANGELES, 2446 Enterprise St.	Tunnell & Co.
MONTREAL, CANADA, 620 Cathcart St.	Maurice Peiler, Mgr.
NEW YORK, 19 Rector St.	A. L. Krock, Mgr.
PHILADELPHIA, 930 North Front St.	Baeuerle & Morris, Inc.
PITTSBURGH, Clark Bldg.	Bruce Irwin, Mgr.
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SYRACUSE, N. Y., 640 Gurney Bldg.	O'Brien Steam Specialty Co.
TULSA, 409 East Archer St.	Moorlane Co.

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19-09-34

1184

Huron	1	0	0	1	0	0	0
Richland	1	0	0	1	0	2	2
Wayne	1	8	0	0	0	5	5
Summitt	0	0	0	0	1	2	3
Fairfield	1	0	0	1	2	1	3
Marion	0	0	0	0	0	1	1
Cuyahoga	0	0	0	0	0	2	2
Knox	4	0	1	2	1	6	7
Coshocton	4	305	0	1	2	3	5
Jefferson	1	0	1	0	0	0	0
Licking	7	131	0	1	1	5	6
Musingum	6	10	2	3	0	11	11
Athens	6	0	3	3	3	10	13
Tuscarawas	4	40	1	2	0	4	4
Stark	6	0	1	5	2	21	23
Belmont	2	13	0	0	0	2	2
Guernsey	14	20	3	9	4	14	18
Crawford	0	0	0	0	0	1	1
Gallia	1	0	0	1	0	4	4
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	3	3
Vinton	1	0	1	0	0	1	1
Lawrence	0	0	0	0	0	5	5
Meigs	8	0	0	8	3	9	12
Total Aug.	86	455	15	49	32	140	172
Total July	50	251	12	25	35	149	184
Difference	36	204	3	24	3	9	12

Lima Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	0	0	0	0	0	3	3
Hancock	2	25	1	0	0	2	2
Allen	0	0	0	0	0	6	6
Auglaize	0	0	0	0	0	3	3
Hardin	0	0	0	0	0	2	2
Van Wert	0	0	0	0	0	3	3
Mercer	0	0	0	0	0	2	2
Sandusky	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Ottawa	2	13	0	0	0	1	1
Lucas	0	0	0	0	0	2	2
Seneca	1	0	1	0	0	3	3
Wyandot	3	60	1	1	2	4	6
Total Aug.	8	98	2	1	2	33	35
Total July	8	15	3	2	3	24	27
Difference	0	83	1	1	1	9	8

Indiana Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	4	10	1	2	1	3	4
Sullivan	2	40	1	0	0	3	3
Pike	0	0	0	0	0	1	1
Daviess	1	0	0	1	0	2	2
Warrick	0	0	0	0	0	4	4
Spencer	1	25	0	0	0	2	2
Harrison	0	0	0	0	0	1	1
Porter	0	0	0	0	0	2	2
Henry	0	0	0	0	0	1	1
Martin	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Hancock	0	0	0	0	0	1	1
Monroe	1	0	0	0	1	1	1
Jay	2	5	0	1	0	3	3
Perry	1	6	0	0	0	2	2
Posey	1	60	0	0	0	1	1
St. Joe	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Vanderburg	1	5	0	0	0	11	11
Total Aug.	14	151	2	5	1	43	44
Total July	19	350	10	2	1	44	45
Difference	5	199	8	3	0	1	1

Illinois Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	1	4	5
Crawford	0	0	0	0	0	3	3
St. Clair	1	0	1	0	0	0	0
Boone	0	0	0	0	1	0	1
Jefferson	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Bond	0	0	0	0	0	2	2
Perry	0	0	0	0	0	1	1
Total Aug.	1	0	1	0	2	13	15
Total July	2	2	1	0	1	13	14
Difference	1	2	0	0	1	0	1

Kentucky Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	44	2,465	12	3	2	14	16
Daviess	1	0	1	0	0	16	16
Hancock	7	355	0	0	0	3	3
McLean	3	20	2	0	0	3	3
Allen	1	0	1	0	0	3	3
Total Aug.	56	2,870	16	3	2	39	41
Total July	28	2,059	6	0	2	26	28
Difference	28	811	10	3	0	3	3

Michigan Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Midland	19	3,385	3	0	26	27	53
Isabella	7	253	0	2	17	27	44
Oceana	1	130	0	0	7	14	21
Lake	0	0	0	0	1	2	3
Gratiot	0	0	0	0	3	3	6
St. Clair	0	0	0	0	3	0	3
Clinton	0	0	0	0	1	0	1
Clare	1	0	1	0	3	0	3
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	1	1	2
Cass	0	0	0	0	3	1	4
Montmorency	0	0	0	0	3	0	1
Sanilac	0	0	0	0	3	0	3
Newyago	0	0	0	0	0	3	3
Saginaw	0	0	0	0	4	2	6
Shiawassee	0	0	0	0	1	3	4
Allegan	0	0	0	0	2	1	3
Livingston	0	0	0	0	1	2	3
Alpena	0	0	0	0	1	0	1
Cheboygan	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Macomb	0	0	0	0	0	1	1
Gennessee	0	0	0	0	1	0	1
Mecosta	3	0	1	2	3	3	6
Montcalm	4	485	3	1	1	11	12
Muskegon	0	0	0	0	5	7	12
Ogemaw	1	150	0	0	7	12	19
Gladwin	0	0	0	0	1	1	2
Eaton	0	0	0	0	0	1	1
Hillsdale	0	0	0	0	2	0	2
Lapeer	1	0	1	0	3	2	5
Arenac	0	0	0	0	1	0	1
Lenawee	0	0	0	0	1	0	1
Osceola	0	0	0	0	0	1	1
Bay	0	0	0	0	1	0	1
Roscommon	0	0	0	0	1	0	1
Total Aug.	37	9,403	7	5	108	129	237
Total July	45	45,804	11	4	112	133	245
Difference	8	36,401	4	1	4	4	8

Eastern Fields

Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Bradford	117	222	0	0
Allegany	11	11	0	0
Venango-Clarion	8	7	1	1
Butler-Armstrong	5	7	1	0
Southwest Pennsylvania	8	153	1	2
Southeast Ohio	52	710	8	8
West Virginia	52	957	7	25
Total August	253	2,067	18	36
Total July	229	876	36	24
Difference	24	1,191	2	6

Rigs and Wells Drilling

Field—	Rigs	Drlg.	Ttl.
Bradford	12	83	95
Allegany	0	7	7
Venango-Clarion	1	7	8
Butler-Armstrong	1	2	3
Southwest Pennsylvania	4	12	16
Southeas. Ohio	14	27	41
West Virginia	36	75	111
Total August	68	213	281
Total July	93	232	325
Difference	25	19	44

Analysis and Treating Lessens Water Problem

(Continued from Page 59)

gives odor, that may be cleared by drawing copper sulphate, in a bag, through the reservoir. Hydrogen sulphide and methane cause odor, and may be cleared by aeration. Chlorination removes micro organisms. Turbidity is due to matter in suspension or in colloidal form in the water, and is cleared by settling, coagulation and filtering, the coagulation being done with a floc.

Chlorination

Chlorination or chloramination of water is the accepted method of final preparation of safe drinking water. Chlorination, or the addition of liquid chlorine, was the first method; the hydrochloric acid formed is the germicide. A more advanced method, described by Hinman and Besson[6] includes the presence due to fermentation, or the direct addition of ammonia compounds with the chlorine. The simplified formula is:

$$NH_3 + Cl = NH_2Cl$$

Chlorine alone has a germicidal (carbolic acid) coefficient of 2.18; adding ammonia gives a coefficient of 6.36; whereas ammonia alone has a coefficient of 0.7, thus, the germicidal power of the combined substances is far superior to either alone.

They report that, using chlorine, three parts per million, did not reduce the bacteria count; using 1.0 p.p.m. of chlorine and 0.5 p.p.m. of ammonia reduced the bacteria count to 100 per c.c. from 50,000 to 100,000 per c.c. with no B. coli in 10 c.c.

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[4]Dissociation of Water in Steel Tubes at High Temperatures and Pressures; Jour. Am. Water Works Assoc. 1929; page 1,373.

[5]A.S.M.E. Transactions; 1932; FSP—54-14; page 171.

[6]A.S.M.E. Transactions; 1929; FSP—51-47; page 363.

[7]A.S.M.E. Transactions; 1932; FSP—54-13; page 163.

[8]Cloramination in the Disinfection of Water; Jour. Am. Water Works Assoc.; 1929; page 1,705.

[9]Ultra Violet Treatment of Water; Jour. Am. Water Works Assoc.; 1929; page 1,361.

Two New Wildcat Gas Wells in Michigan Field; Pool Ten Miles Long Is Indicated by Tests

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Sept. 17.—Most important of 10 successful completions in Michigan were two new wildcat gas wells, one in Millbrook Township, Mecosta County, and one in Gilmore Township, Isabella County. Four new gas wells were reported in as many townships in three counties, six new oil producers aggregating about 1,000 bbls. daily initial and three dry holes.

Gordon Oil Co.'s No. 1 Garner Brothers, C SE NE Section 32-13n-7w, Millbrook Township, Mecosta County, which had an open flow gauged at 4,500,000 feet about halfway between two completed wildcat gassers, indicated a possible new pool 10 miles long in Mecosta and Montcalm Counties. The other wells are Columbia Oil & Gas Co.'s No. 1 Albert Dethmers in Section 23, Hinton Township, several miles northwest of the Garner well, and Old Dutch Oil & Gas Co.'s No. 1 Forgar in Section 11, Belvidere Township, Montcalm County. The Dethmers well flowed at the rate of 6,700,000 feet while the Forgar well was a 6,000,000-foot gasser. Bryan and Martin's No. 1 Virgil Sheets in Section 35, Millbrook Township, made about 4,000,000 feet after being deepened a few feet into the Michigan pay. These three wells are in a general line southeast of the Austin Township, Mecosta County, Pool from which the new $500,000 natural gas pipe line is being laid to Muskegon by the American-Michigan Pipe Line Co.

Isabella County

Hunter Atha's No. 1 M. F. and F. M. Phillips, C SW NE Section 36-16n-5w, Gilmore Township, Isabella County, came in with an initial flow of nearly 500,000 feet, 3 feet in the Michigan pay. The old Uhl-Sarver-Raymer's No. 1 McManaman in Section 31-16n-4w, Vernon Township, Isabella County, was successfully recovered as a 700,000-foot gasser. The Atha-Phillips well is about 6 miles west of the Vernon Township oil and gas pool and about a mile northwest of the McManaman test and is expected to extend drilling in a northerly direction in Isabella County.

Another Vernon Township well drilled into the first pay in the Dundee gave indications of producing at least 40 bbls. a day but was being drilled deeper. It was J. V. Wicklund's No. 3 Durnin, NW SE NE Section 22-16n-4w, which topped the Dundee at 3,770 feet, hit the pay at 3,783 feet and was drilling at 3,787 feet. Two other Isabella County completions were "dusters." Park Oil Co.'s No. 1 Edwin L. and Rachel A. Russell, NW NE NW Section 22, abandoned at 3,950 feet and Lupher Drilling Co.'s No. 1 Baer, NW NE NE Section 36-14n-6w, Broomfield Township, Isabella County, abandoned at 3,753 feet after topping the Dundee at 3,669 feet.

Midland County

Pure Oil Co.'s No. 3 C. D. Alexander, NE SW SE Section 18-13n-1w, Porter Township, was the largest oil completion of the week, about 750 bbls. a day from the Dundee. It was drilled to 3,407 feet. McClanahan Oil Co.'s No. 4 Norman Breu, SW SE NE Section 20, same township, made about 125 bbls. Dundee limestone was topped at 3,388 feet and the well drilled to 3,427 feet. L. G. Thompson's No. 1 J. Shirts, SW NE SW Section 18-14n-2w, Greendale Township, made about 50 bbls. on the pump after treatment for a show of 2,000 feet of oil in the Dundee topped at 3,485 feet and drilled to 3,575 feet. Pure's No. 7 Sias, SW SW SW Section 8, same township, had 500 feet in the hole after encountering oil at 3,582 feet in the Dundee. Sun Oil Co.'s No. 6 J. L. Miller estate, SW NE SW Section 16, Porter Township, made one flow of 40 bbls. of oil from the upper Traverse but is being carried to the Dundee.

Porter Township still leads in Michigan activity though only about 30 wells are drilling compared with last spring when the total reached about 70. Activity has shifted from Section 21 where only one well is drilling across the river to Section 18 where eight drilling wells are listed. There are only six undrilled locations in Section 21.

Operators are watching Goll, Graves & Mechling's No. 1 H. A. Crane in Section 21, Mills Township, Midland County, in which formations are reported running higher than in a Larkin Township well, 5 miles south, abandoned as a dry hole last spring.

Montcalm County

Daily Crude Oil Co.'s No. 1 Gustavison, SE NW SW Section 2-12n-6w, Home Township, Montcalm County, was dry and abandoned at a total depth of 3,700 feet after testing the Dundee at about 3,500 feet.

Ogemaw County

Renewed interest is shown in Ogemaw County. More than a dozen wells are active in this field, 50 miles north of the Mount Pleasant area. McClanahan Oil Co.'s No. 1 Guilford, NE NE NW Section 29-22n-2e, West Branch Township, has been plugged back to the Dundee after unsuccessfully testing the Monroe. Operators now will attempt to complete it with acid treatment in the Dundee where a good show was encountered. Kerr and others' No. 1 Dack, West Branch Township, reported a good show in the Dundee and will be treated.

WESTERN MICHIGAN

Two new producers, a small Dundee oil well and a small Monroe gas well, were completed in Muskegon Township, Muskegon County. Jetter Oil Co. drilled No. 1 Torrent Estate, NE NE NE Section 17-10n-16w, Muskegon Township, into the Dundee oil sands as a daily producer of more than 25 bbls. West Michigan Consumers Co. expected to complete its No. 1 Stanley Daniloff, Section 8, same township, as a Monroe gasser with an open flow capacity of at least 100,000 feet. Monroe pay sands were struck at 2,254-60 feet. It was drilled to 2,270 feet and was to be shot. Lima Oil Corp. drilling an east offset to Joseph Murlin's No. 1 Ross, struck about 10 bbls. a day in the upper Traverse in No. 1 Continental, SE NE NW Section 22, Muskegon Township, but is drilling to the lower Traverse or Dundee. A. S. Cochran is driving pipe in No. 3 Frank J. Durham, S half SW Section 15, Muskegon Township. West Michigan Consumers Co. is deepening Joliet-Morris Development Co.'s No. 3 John Ehlers, Section 8, Muskegon Township, in search of gas in a stray sand between the Dundee and Monroe formations.

Oceana County

Two wells are drilling in Oceana County, H. C. Nelson's No. 3 Copenhaver, NE SE NE Section 36, Hart Township, and Reed Oil Co.'s No. 1 John Robertson in Section 13, Otto Township, through the red rock and about ready to shut down.

New Locations

Thirteen permits for new projects in eight of five counties were issued. Porter Township, Midland County, continued to lead with four permits: Gordon Oil Co.'s No. 2 Finch Sisters, NW NE NW Section 28-13n-1w; Pure Oil Co.'s No. 11 Mina Naramore, SW SE SW Section 15, and No. 6 Charles Hill, SW SE NE Section 18 and McClanahan Oil Co.'s No. 2 E. Breu, NE NW SE Section 20.

New activity in Mills Township, Ogemaw County, resulted in permits for Melling Oil & Gas Co.'s No. 1 State of Michigan, SE SE NW Section 6-21n-2e, and McClanahan Oil Co.'s No. 1 C. Conrad, NW NW NE Section 22. The McClanahan company also took out a permit for No. 1 L. Doran, SE SW SE Section 27-22n-2e, West Branch Township, Ogemaw County.

Wittmer Co., Inc., took out permits in Isabella Township, Isabella County, for No. 1 Merrill D. Dunn, E half E half NW Section 13-15n-4w, and No. 1 Malcolm McCloud, W half W half SE Section 12. Two other Isabella County tests will be Jasmid Oil Corp.'s No. 2 A. Weeznsky, NE NW NE Section 30-15n-3w, Denver Township, and D. R. Jones' No. 1 Byron Youman, C SE NW Section 23-15n-6w, Sherman Township.

William C. Sowell took out a permit in Oregon Township, Lapeer County, where a new Berea Field is developing. It will be No. 2 Joehler & Wilson, SW SE SW Section 4-8n-9e. T. F. Caldwell, Inc., obtained a permit for No. 1 Beecher Mackey, NW SW Section 21-1n-7e, Lyon Township, Oakland County, a wildcat in an unsettled area.

Central West Reports 52 Completions; Fourteen in the Fields of Kentucky

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Sept. 17.—In the Central West Field, comprising the Lima, Indiana, Illinois, Central Ohio and Kentucky Fields, there were 52 wells completed, 10 dry holes, 18 gas wells and 24 oil producers with an initial production of 749 bbls. The Lima Field of northwestern Ohio and the Illinois Field failed to report any new wells. The most active fields were Central Ohio, Indiana and Kentucky. The outlook for Kentucky is inviting for active work in the shallow sands, which is a good grade of oil, and most of the work is centered in Ohio and Hancock Counties.

CENTRAL OHIO

In the Central Ohio Field there were 19 completions, with 2 dry holes, 14 gas wells and 3 oil wells, with an initial of 89 bbls.

In Ashland County, Ohio Fuel Gas Co.'s No. 1-5,830 D. D. Stacher farm, Section 32, Perry Township, is a gas well at a depth of 2,828 feet. Robison and others are drilling No. 5 J. A. Heffelfinger farm, Lake Township.

In Medina County, Ohio Fuel Gas Co.'s No. 1-5,862 Mable P. Spicer farm, Seciton 21, Lafayette Township, is a gas well at 3,148 feet. Same company made a location for No. 1 George Buffham farm, Lots 40-41, Harrisville Township.

In Lorain County, Ohio Fuel Gas Co. made a location for No. 1-5,903 Edwin Robson farm, Lot 15, Carlisle Township.

In Holmes County, Ohio Fuel Gas Co.'s No. 1-5,840 Walter C. Uhl farm, Section 11, Mechanic Township, was dry at 3,050 feet. Same company is drilling 1-5,848 on the Leo J. Haudenschild farm, Section 15, Washington Township, and No. 1-5,855 on the Morgan A. Quick farm, Section 28, same township. Same company is drilling No. 1-5,944 Silas Pyers farm, Section 20, Monroe Township. The Lydic Oil & Gas Co. is drilling No. 1 Ada Sprang farm, Section 12, Monroe Township.

In Richland County, Ohio Fuel Gas Co. is drilling No. 1-5,884 on the George H. Hammond farm, Section 16, Worthington Township, and has a rig for No. 1-5,906 W. T. Ramsey farm, Section 17, same township.

In Wayne County, Harmon & George are drilling No. 2 Henry Hagerman farm, Section 20, Chester Township, and David Shafer is drilling on the Earl Belz farm, Section 16, Cannon Township.

In Fairfield County, City Natural Gas Works is drilling No. 3 on the Charles Fauble farm, Section 34, Berne Township, and has a rig for No. 2 on the B. E. Friesner farm, Section 6, Pleasants Township.

In Knox County, Upham Gas Co. is drilling No. 1 Charles M. Wander farm, Section 12, Jefferson Township. Ohio Fuel Gas Co. is drilling No. 1-5,811 J. G. Fowler farm, Howard Township. Lacknet and others are drilling No. 1 George Lepley farm, Lot 4, Butler Township.

In Coshocton County, Preston Oil Co.'s No. 3-1,542 E. R. Van Winkle farm, Section 15, Perry Township, produced 6 bbls. initial at a depth of 3,062 feet. Murphy Brothers are drilling No. 2 John S. Rine farm, Section 17, same township. Preston Oil Co. is drilling No. 1,546 on the D. S. Snyder farm, Newcastle Township. Ohio Fuel Gas Co.'s No. 3-5,859 Victor Scheibe farm, Lot 11, Clark Township, is a dry hole at a depth of 3,130 feet.

In Licking County, William Stricker's test on his own land, Section 14, Mary Ann Township, is a gas well at 588 feet.

In Muskingum County, Pure Oil Co.'s test on the Francis M. Norman farm, Section 22, Brush Creek Township, produced an initial of 20 bbls. at a depth of 4,068 feet. W. A. Crowley is drilling on the William and Catherine Wentz farm, Section 17. In Salt Creek Township, same county, Mid-East Oil Co. is drilling No. 1 Ben F. Young farm, Section 17.

In Tuscarawas County, Capital Drilling Co. is drilling No. 6 on Stewart Asher farm, Lot 19, Washington Township. Oxford Oil & Gas Co. is drilling No. 5 Thomas B. and Rosie Shearer farm. Glass & Perkins are drilling No. 1 James Mascotti farm, Lot 33, Goshen Township, and Frey and others are drilling No. 1 Fairfield Brick Co.'s property, Lot 4, Fairfield Township.

In Starke County, Ohio Fuel Gas Co. is drilling No. 2-5,900 on the A. J. Stoner farm, in Jackson Township. McFarland and others are drilling on the Edward

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Large Gasser Struck in Washington County, Pa.; Nineteen Completions in Lower Eastern Field

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Sept. 17.—A large volume of gas was struck in Amwell Township, Washington County, Southwest Pennsylvania, in the test being drilled by Carnegie Natural Gas Co. on the C. W. Farabee farm of 15 acres. The top of the Thirty Foot sand was met at 2,693 feet with gas showing at 2,720-25 feet. The volume was slightly in excess of 5,000,000 feet a day with a rock pressure of 350 pounds. The total depth was 2,727 feet and the gas was then turned into the lines.

Nineteen wells were completed in the lower Eastern fields during the week, of which 9 were gassers and 10 producers with an initial production of 118 bbls. There were also seven dry holes. Most of the new production was in Southeast Ohio.

SOUTHEAST OHIO

In Belmont County there were three completions and one dry hole. In the NW of Section 26, Richland Township, O. K. Oil Co. completed No. 3 on the State School Lands in the Berea sand at a depth of 1,892 feet. It produced 15 bbls. the first day after shot. In the SW of this section, Peters and Patterson completed a second test on the Lorain Coal & Dock Co. lease as a fair gas well. It was drilled in the Berea sand to a total depth of 1,850 feet and has a showing for 1,000,000 feet a day. In the NE of Section 25, Richland Township, Richland Developing Association completed No. 6 on the John R. Lochary farm in the Maxon sand at a depth of 1,305 feet. It is a gas well gauging 350,000 feet a day. In the NE of Section 26, same township, Union Gasoline & Oil Corp. drilled a test on the Wenzel Krotkey farm through the Berea sand to a depth of 1,870 feet. It was a dry hole.

In Holmes County, Ohio Fuel Gas Co. drilled a test on the Walter C. Uhl farm in Section 11, Mechanic Township, through the Clinton sand to 3,752 feet and it was dry.

In Jefferson County, C. S. Kelly and others completed No. 7 on the Ella E. Baxter farm in Section 29, Saline Township. It is a 12-bbl. well, natural, from the Injun sand at a depth of 740 feet. In Steubenville Township, Edward C. Collins and others drilled No. 3 on the Steubenville & Wheeling Traction Co. property in the SW of Section 28. It found the Berea sand dry and the total depth was 1,570 feet.

In Muskingum County, Pure Oil Co. completed a test on the Francis M. Norman farm in the NE of Section 22, Brush Creek Township. It was drilled in the Medina sand, depth 4,068 feet, and produced 20 bbls. the first day after shot. In the NW of Section 7, Jackson Township, same company drilled a test on the Millard T. Acord farm through the Clinton sand, total depth 3,179 feet, and it is dry.

In Monroe County, J. C. Christy and others completed No. 3 on the J. H. Shafer farm in the NW of Section 11, Bethel Township. It was drilled in the Big lime at 1,386 feet, showing for 40 bbls. a day natural.

In Washington County, Pearl Sexton and others drilled No. 2 on the P. and A. Boye farm in Section 25, Salem Township, through the Stray sand to 708 feet. It was a dry hole.

SOUTHWEST PENNSYLVANIA

There were two additional completions in Southwest Pennsylvania, one a small producer. In North Franklin Township, Washington County, George Bungard & Co. completed No. 6 on the John G. Clark farm in the Big Dunkard sand at 903 feet. It will make a 2-bbl. pumper.

In Greene County, Natural Gas Co. of West Virginia drilled deeper the old gas well on the Jacob Ewing farm, No. 1, to 2,751 feet. The top of the Gordon Stray sand was at 2,717 feet with gas showing down to 2,719 feet and the bottom of the formation at 2,722 feet. It has a volume of 270,000 feet a day. The farm is in Richhill Township.

In this county, same company is rigging up on the Peter Ashby farm near Jacktown. Greene County Gas Co. is drilling at 2,525 feet in deepening No. 1 on the Stephen Crayne farm.

In Amwell Township, Washington County, Carnegie Natural Gas Co. has reached 1,937 feet on the A. M. Cole farm. This company is hauling in the rig on the Carron farm and has relocated the test on the Manon farm. Manufacturers Light & Heat Co. has made a location on the R. A. Rankin farm offsetting the large gas well of Carnegie Natural Gas Co. on the C. W. Farabee farm.

In East Findley Township, Washington County, Union Gasoline & Oil Corp. in drilling on the J. S. Hazlett farm struck the top of the Nineveh Thirty Foot sand at 2,702 feet with about 280,000 feet of gas showing at 2,709 feet. The tools are down 2,730 feet. The test of Natural Gas Co. of West Virginia on the J. N. Ealy farm is drilling at 2,100 feet and the test on the Charles Ealy farm at 2,400 feet. The J. N. Clutter No. 1 is still making about 40 bbls. a day and Sprowls No. 2 about 50 bbls. a day. Sarah Carter No. 4 is holding at 50 bbls. a day.

No new locations have been made on the productive Fifth sand streak in Franklin Township, Washington County, running from the Alberta Iams farm through the John Day and C. T. Dodd wells. The test on the John Day was put to pumping this week.

In North Franklin Township, Washington County, E. H. and J. B. Tague have started spudding No. 12 on the Adaline D. McKennan Estate.

WEST VIRGINIA

In West Virginia there were five new producers, all small, and several wells reconditioned. In Clay County, South Penn Oil Co. completed No. 108 on the O. D. Stockley farm in Henry district in the Injun sand showing for 10 bbls. a day. It is on Big Sandy Creek about 610 feet south of No. 24.

In Doddridge County, Hughes River Oil & Gas Co. completed a test on the C. P. Broadwater farm in Southwest district in the Big lime at 1,901 feet. It will make a 5-bbl. well.

On the waters of Lost Run in Clay district, Ritchie County, Lucky Strike Oil Co. completed a test on the A. R. Daugherty farm in the Injun sand at 2,064 feet. It is a 5-bbl. producer, natural.

In Roane County, Oil City, Trust Co. and others completed No. 18 on the B. C. Tucker farm in Spencer district. It was drilled in the Salt sand and is showing for 4 bbls. a day.

In Wayne County, on the waters of Patrick Creek in Butler district, Edward Oil & Gas Co. completed a second test on the Albert Ronk farm, about 800 feet northeast of No. 1. It is producing about 5 bbls. a day from the Berea sand.

On Jordon Creek in Big Sandy district, Kanawha County, Virginian Gasoline & Oil Corp. shot No. 1 on the Sophronia Young farm in the Squaw sand and increased production from 2 to 5 bbls. a day. On the same stream, South Penn Oil Co. shot No. 2 on the F. M. Young farm in the same formation and has a half-barrel producer. On Lambs Run in Murphy district, Ritchie County, King Knob Gas Co. reconditioned No. 7 on the Payton Tingler farm and it is making 2 bbls. a day.

Gas Wells

In Calhoun County, Carroll and Hamilton completed a test on the Carl and Robert Knotts farm in Washington County in the Injun sand at 1,925 feet. It has a volume of 460,000 feet a day, natural. In Lee district, F. F. McIntosh drilled No. 5 on the Mary E. Hays farm through the Injun sand to 1,975 feet. There was not enough gas, natural, for a test.

In Gilmer County, E. D. Norman and others completed a test on the Hulda Moore farm in Center district in the Injun sand at 1,867 feet, and it is a gas well.

In Lincoln County, David Gas Co. completed a test on the T. W. Dolan farm in Jefferson district at total depth of 2,173 feet. The Big lime extended from 1,450-1,657 feet and the Berea sand from 2,147 to 2,167 feet. There was a volume of 124,000 feet a day from both formations.

In Wetzel County, C. B. Lewis and others completed a test on the John Blatt farm in Proctor district in the Maxon sand at 1,865 feet. It is a fair gas well gauging over 1,500,000 feet a day.

In Wirt County, R. C. Waggner and others completed a test on the J. W. Bunner farm in Burning Springs district in the Salt sand at 1,560 feet. It is a gas well having a volume of 116,000 feet a day.

In Wood County, Burnt Hill Oil Co. drilled a test on the B. F. Mayo farm in Williams district through the Injun sand and it was dry.

Drilling in West Virginia

In Boone County, Godfrey L. Cabot, Inc., is building a rig for a second test on the White and Hopkins lease. No. 1 was a large gas well. On the Spruce-Boone lease, this operator has reached 2,135 feet and is building a rig on the H. Nunnenkamp and others lease. All are in Washington district.

In Calhoun County, Southeastern Gas Co. is spudding No. 5 on the Ida M. McCoy farm in Lee district. In this district, Murlick Oil & Gas Co. is drilling on the Ida G. Flesher farm. In Sheridan district, Chemical Oil & Gas Co. has a rig for No. 7 on the Tasril Taylor farm. In Center district, H. V. Burt and others have started drilling on the Beeman Wright farm. In Sherman district, Dudley Lutz and others have reached 1,760 feet on the Simon Moniger farm.

In Gilmer County, on Tanner Creek in DeKalb district, A. E. Ellis has completed a rig on the Edward Reynolds farm. Clem Morris and others have reached 500 feet in No. 5 on the Cora B. Gainer farm. In Center district, South Penn Oil Co. has made a location on the Flora S. Bennett farm 700 feet south of Godfrey L. Cabot, Inc.'s No. 1 on the A. H. Blackshere farm, which is a good producer. Godfrey L. Cabot, Inc., is drilling No. 1 on the R. W. Bennett farm from the Injun sand to the Berea sand. K. M. Hunt and others are rigging up on the J. R. Simmoan and others lease. McCall Drilling Co. is down 530 feet on the L. R. Moore farm, No. 5. West Virginia Utilities Co. has reached 685 feet on the John J. Gerwig farm, a test.

In Lincoln County, United Fuel Gas Co. is down for a shot in drilling deeper No. 2,074 on the Charlotte Watson farm in Sheridan district. In Carroll district, C. T. McGhee and others have reached 300 feet on the Victoria Adkins farm.

In Mingo County, F. H. Yates is drilling at 837 feet on his own farm in Harvey district. In Monongalia County, Chartiers Oil Co. has reached 3,390 feet on the Simon Shriver heirs farm, Clay district. Martin Oil & Gas Co. is drilling at 1,760 feet on the David Lemley farm in Cass district, a test.

In Pleasants County, Dinsmoor & Co. have started drilling No. 9 on the George Leonard farm in Washington district. Albert Neeley and others are down 210 feet on the Theodore Clovis farm in Lafayette district, a second test. In McKim district, S. Powell and others are drilling at 975 feet on the Brouse and Haines lease.

Ritchie County

In Ritchie County there are several new locations. In Union district, Jobes and Prunty have made a location on the R. G. Davis and others lease. In Clay district, John M. Taxler and others have a drilling machine on the W. C. Butcher farm on Bonds Creek. Richards Farm Oil Co. has made a location for No. 5 on the Corley Ball farm. H. N. Rinehart has a location for No. 6 on the J. B. Markey farm. Lucky Strike Oil Co. has made a location on the J. D. Rymer farm. Huber and Gainer are moving in the material on the Phoebe Parrish farm. Heneghan and Hanlon are down 1,900 feet in the second test on the John Mahaney farm. George Allen is drilling at 1,550 feet on the Frank Sheets farm, and W. H. Bickle has reached 1,670 feet on the Fred Pifer farm.

In other parts of Ritchie County there is additional work. On Leatherbark Creek in Murphy district, L. P. Bickel has rigged up for a second test on the Morris Brothers farm. On the south fork of Hughes River in this district, Hughes River Oil & Gas Co. has started drilling No. 1 on the Ben Jenkins farm about 1,400 feet west of the test on the John and Patrick Coyle farm. Patton and Wilson have made a location on their own property. Everett Starcher and others are down 1,900 feet on the M. J. Livingston farm. T. H. Hanley is drilling at 1,500 feet on the D. M. Miller farm, a test. In Grant district, M. Edwards and others are drilling on the Catherine Freeman lease, and Sears and others have spudded on the W. H. Grudier farm. Dunn Marr Oil & Gas Co. has reached 1,890 feet on the P. D. Starr farm.

In Roane County, Everett Starcher and others have reached 1,558 feet on the J. N. Harold farm in Geary district. In Curtis district, Reedy Oil & Gas Co. has started a machine at No. 6 on the L. M. Riddle farm of 140 acres about 600 feet south of No. 2. No. 2 is being drilled deeper. On Buffalo Creek, in this district, Henderson Oil Co. has a machine ready for No. 3 on the F. H. Bee, Jr., farm 600 feet east from No. 2. Kenny M. Hunt and others have made a location on the Lizzie Moore heirs farm. In Smithfield district Charles Despard is rigging up the second test on the Charles Starcher farm. Sand Run Oil & Gas Co. has rigged up for a sec-

ond test on the Josephine Young farm.

In Wayne County, on the waters of Patrick Creek, Chartiers Oil Co. has started drilling a test on the Freeland Thompson farm in Butler district. It is about 800 feet south of the Edwards Oil & Gas Co.'s No. 1 on the Albert Ronk farm.

BRADFORD FIELD

BRADFORD, Pa., Sept. 17.—The Bradford Field led last week in decreased production for the Pennsylvania grade crude oil districts showing a decline to 33,000 bbls. daily average for the week ending September 8, as compared with 35,450 bbls. in the preceding week. Total daily average production for the grade area was 65,450 bbls. for the week ending September 8, and 71,200 bbls. for the week ending September 1. Output by districts for the two periods follows (daily averages):

	Sept. 8	Sept. 1
Allegany	8,100	8,650
Bradford	33,000	35,450
Kane to Butler	7,000	7,350
Southwest Pennsylvania	2,300	3,050
Southeast Ohio	4,150	4,650
West Virginia	10,900	12,100
Total	65,450	71,200

Central West Fields

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Frank farm, Section 12, same township. Lyons and others' No. 1 Christ Graber farm, Section 22, is a gas well. In Perry Township, White & Lyons have a rig on the Hattie Leman farm, Section 26.

In Belmont County, Local Oil Co. has a fishing job at 800 feet in No. 2 on the A. J. and R. E. Phillips farm, Wayne Township.

In Guernsey County, E. C. Quilland's No. 2 Anna Shearer farm, Section 5, Monroe Township, produced 7 bbls. initial at 3,704 feet. In Oxford Township, Gordon Oil Co.'s No. 2 Charles Wigedon farm, Section 35, is a gas well at 1,359 feet. Jewell & Hammond are drilling on the Frank L. Thompson farm, Section 13, Richland Township.

In Gallia County, Ohio Fuel Gas Co.'s No. 3-5,881 Emmett Elliott farm, Section 22, Addison Township, is a gas well at 1,591 feet.

In Vinton County, Chartiers Oil & Gas Co.'s No. 1 Dennis Burnett farm, Section 19, Mason Township, is a gas well at 3,610 feet.

In Meigs County, Ohio Fuel Gas Co.'s No. 1 E. E. Redinger farm, Section 4, Rutland Township, is a gas well at 1,004 feet. In the same township, Rutland Gas Co.'s No. 6 Florence Mutchler farm, is a gas well at 779 feet. In Lebanon Township, Joe Rubin and others' No. 1 Everette Mosier farm, Section 25, is a gas well at 1,944 feet. Charles L. Bailey and others are drilling on the Charles L. Bobo farm, Section 12, Columbia Township.

INDIANA

The Indiana Field is making a much better showing than for a year or so. There were 18 wells completed, of which nine were oil wells with an initial of 125 bbls., four gas wells and five dry holes.

In Gibson County, Big Four Oil & Gas Co.'s No. 8 on the Catherine Sloan farm, showed around 40 bbls. initial at 1,253 feet. G. B. Schout's No. 2 on the James Armstrong heirs, in Donation 108, and 400 feet south of No. 1, was a 2,000,000 foot gas well at 1,232 feet. In Barton Township George W. Porter is shut down at 800 feet on the Kohlmeier heirs farm, NE NE Section 13, Barton Township. Knox Engineering Corp.'s No. 4 Martha J. McCullough farm, SW NW Section 10, same township, was dry. In Patoka Township, Nelson Douglass and others' test on the Mary W. Schutz farm, SW SE Section 9, reported an initial of 5 bbls. at 881 feet and No. 2 same farm is drilling.

In Jay County, N. E. Masters' test on the Harvey Weaver farm, SE SE Section 24, Wayne Township, is a gas well at 500 feet. E. G. Henderson's test on the F. A. Freemyer farm, Section 36, Noble Township, reported 5 bbls. and in Penn Township Henderson & Cole's No. 1 Floyd Grummeyer farm, SE Section 35, reported 3 bbls. initial. A. Merry Jones and others are drilling on the Jennie Harriett farm, Section 22, same township.

In Perry County, Charles Dice's test on the Dixon farm, Section 2, Anderson Township, reported 2 bbls. Bankable Oil Co. is drilling around 2,250 feet on the Charles Shutter farm, SE SW Section 4, Troy Township. In Clark Township Anderson Creek Oil & Gas Co. is drilling on the Frank Delasse farm, Section 25. Rome Oil Co. is drilling a wildcat on the Henry Dutschke farm, NW NW Section 28, Tobin Township.

In Dubois County, F. L. Damron's test on the Albert Fritch farm, SE NW Section 32, Harbison Township, was dry at 744 feet, and same party drilled a dry hole on the F. Sendelwich farm, SW NW Section 33, same township. L. R. Henley is drilling on the J. Eck farm, NW NW Section 5, same township.

In Washington County, A. B. Bement's test on the C. K. Humphreys farm, S half SW Section 33, Washington Township, is a gas well at 735 feet.

In Posey County, William Damm's test on his own farm, SE SW Section 14, Robinson Township, produced 20 bbls. initial, and Adams Corner Oil Co. is drilling on the Adam Will farm, SW NE Section 2, same township.

In Vanderburg County, Drake & Young's No. 2 William Roth farm, S half SW Section 20, Center Township, produced 10 bbls. initial. Same parties' No. 3 Fred Kreiger farm, SW SW Section 28, same township, produced 6 bbls. first 24 hours. John L. Drake's test on the Charles and Louisa Schmitt farm, NW SW Section 20, is dry. In German Township, Nelson-Douglas Co.'s test on the Ben Gibson farm, was dry at 1,290 feet. A. A. Douglass and others are drilling No. 1 Christian R. Riggs farm, Section 15, Perry Township.

In Knox County, Busseron Township, O. A. Thayer and others' No. 3 on the Elzia Hall farm, SW NW Section 14, produced an initial of 30 bbls.

In Marion County, the Tuberculosis Hospital's Sunnyside test in Lawrence Township is reported a gas well at 1,016 feet.

In Pike County, Texcastle Oil & Gas Corp., drilling No. 5 W. H. Lindy farm, NE SW Section 31, Clay Township, is shut down around 150 feet for water. H. C. Darby and others are drilling No. 1 on the Sam Dearing farm, SW SW Section 29, Lockhart Township. In Logan Township, same county, Rendall & Stroble have a fishing job at 1,340 feet on the No. 1 Miller farm, SW SW Section 14.

In St. Joseph County, Christ Shrock is down 2,800 feet in No. 2 on the Harry Sones farm, NE SE Section 29, Harris Township.

In Delaware County a test well is being drilled on the S. F. Frank farm in the southwest part of Niles Township.

In Vanderburg County, Peoples Savings Bank of Evansville's No. 1, N half NE Section 31, Perry Township, drilled by the Dome Drilling Corp. was dry at 1,290 feet.

KENTUCKY

Although 14 completions were reported in the Kentucky fields in comparison to six completions the previous week, production was somewhat lower. Ohio County reported nine completions with a total production of 475 bbls. In the Mathews Pool, Snowden & McSweeney Co.'s No. 11, on the J. W. Peckenpaugh farm, was shot to an initial of 90 bbls. In the same pool, W. E. Hupp & Co.'s No. 19, on the J. W. Odell farm, was reported at 50 bbls. Same company's No. 20 on the same farm had a showing of 75 bbls.

In the Roberts Pool, Snowden & McSweeney Co.'s No. 7 and No. 8, on the G. E. Fuqua farm, were completed. No. 7, in the southwest corner of the farm, had a showing of 15 bbls. while No. 8 was reported doing 20 bbls. in the southeast section. On the J. Roberts farm, Stewart-Gealy & Co.'s No. 8 had an initial of 50 bbls. Miller & Co.'s No. 1, northeast section of the Bogard farm, was shot to 60 bbls. the first 24 hours.

At Oak Station, same county, W. E. Hupp & Co.'s No. 1, on the L.&N. R.R. Co.'s land, was reported at 40 bbls. Vickers & Co.'s No. 2, on the Jones farm, same station, had a showing of 75 bbls.

Hancock County reported five completions, two dry holes and a production of 60 bbls. Yunkers & Co.'s No. 3, on the F. W. Bailey heirs farm, was shot to 30 bbls. James C. Ellis completed his No. 1 on the John Easton farm, at 15 bbls. In the Grover Pool, same county, Joseph B. Mayer's No. 2 had a showing of 15 bbls. 400 feet east of the Grover Pool No. 1. Goldberg & Co.'s No. 1 was dry. It was drilled 60 feet below the Jet sand to a total of 435 feet. In the Mathews Pool, same county, on the Jesse Stewart farm, Joseph B. Mayer's No. 6 was drilled to 500 feet for a dry hole.

EDWARD M. BOYLE DIES

Edward M. Boyle of Pampa, Tex., died at his home there recently. He was a native of Pennsylvania, the son of John and Catharine Boyle, pioneer residents of Armstrong County. His birthplace was at Bradys Bend, Pa. With the exception of six years, when he was superintendent of the National Refining Co., Mr. Boyle was an employe of the Standard Oil Co., spending more than 50 years in that capacity. At the time of his death he was connected with the Illinois Pipe Line Co.

HEBRON TOWNSHIP WORK

COUDERSPORT, Pa., Sept. 15.—Allegany Gas Co. is completing a well which is producing 10,000,000 feet at a little more than 2 feet in the Oriskany at a depth of 5,256 feet, on the Cummings land in Hebron Township. Hungiville Development Co. completed No. 3 Booth, which tapped the pay at 5,222 feet for 500,000 feet.

Acme Drilling Co. has five new locations for the Lycoming Producing Co. Crews are building roads on the W. B. Hemphill and Burt & Lyman properties. A rig is going up on the William White farm, and one on the O. W. Greenman farm. Another location is on the R. and G. Carmer farm. Rose Lake is drilling at 360 feet. North Branch Development Co. is building a rig on the Chloe Kenyon farm. Belmont Quadrangle Co. is waiting on a new wire line and has shut down at 4,550 feet on the Clark farm, Independence Township. This company is down 1,950 feet on the Coston farm, Greenwood. Wittmer Oil & Gas Co., on the O'Harrigan farm, Greenwood, is drilling at 1,025 feet.

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Seven Proposed Locations in Houston County; Boone Bros. Discovery Well Increases Flow

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Sept. 15.—Seven proposed locations for tests around the discovery well of Boone Brothers, No. 1 Trinity State Bank, which opened up a new pool in the southern part of Houston County last week have assured this new field of a fast development program. Three of the seven locations have derricks up and should be drilling by the middle of the week. Boone Brothers have derrick up for No. 2 Trinity State Bank, 660 feet southeast of the discovery well in the Charles McEllis Survey. About 2 miles northeast of the discovery, and 5 miles southwest of Lovelady in the John Walker Survey, H. L. Hunt of Tyler, who has purchased several tracts in the area during the week, is rigging up for No. 1 Clara Starr, on a 223-acre tract. About 8 miles northeast of the discovery, Sterling Oil & Refining Co. has completed derrick for No. 1 A. J. Knox in the Omy Weir Survey, about 6 miles west of Lovelady. Although actual foot measurements are not available, Dick Hoffman of Conroe has made two proposed locations on his 22 acres, W. H. Mangum 22-acre lease, about 1½ miles north and slightly east of the discovery. It is reported Weinert and Brockman of Sequin, Tex., have agreed to drill two wells for a half interest in a 23-acre tract on the Boone block, south of the discovery in Walker County.

The discovery well has increased its flow somewhat and the last reports were it was flowing an estimated 25 to 30 bbls. per hour into pits through one-quarter inch tubing choke with tubing pressure 180 pounds and casing pressure 590 pounds, with no water present. One 1,000-bbl. storage tank has been filled and the operators are constructing two additional tanks of the same capacity. A 10-car loading rack is to be constructed on the main line of the Waco, Beaumont, Trinity & Sabine Railroad, about 1½ miles due south of the well and the operators are to lay a 4-inch line from the well.

Feverish Activity

Leasing throughout the district has been at a feverish pace since the discovery, and it is expected to gain momentum due to the performance of the well during the week. In the eastern part of the county, Gulf Production Co. has increased its acreage holdings to 27,500 acres, adding 2,500 acres in the Kenard and Ratcliff areas. It is reported the company's geophysical crews are now working this area. Humble Oil & Refining Co., which has 1,000 acres in the immediate area of the discovery, has not announced location for any test but no doubt will make a location within the next few days. The company holds offset acreage to the discovery well.

Due north of the present play a block is being taken centering in the F. Perez, John Welsh, John Gregory and adjoining surveys under the name of Paul Harding, trustee. It is reported Tom O'Payne and H. Y. Noonam are assembling the block, based on geological work done about a year ago. Adjoining this block on the north, it is reported a well is to be drilled west of the road and about the center of the town of Postoak in the William Pressick Survey. Apex Drilling Co. drilled a test about a mile east and is reported to have had a show of oil below 2,300 feet. Leasing and royalty trading is extending over a large area, the major play extending in a northeasterly direction from the Boone well toward the town of Crockett.

On the east side of Boling Dome, Fort Bend County, Allied Minerals, Inc.'s No. 1 J. R. Farmer, which opened up a new producing horizon from the Frio sand two months ago, has been recompleted at a new total depth of 4,442 feet after deepening from its former depth of 4,428 feet where it had been completed for an 800-bbl. well. The well was killed after it started making considerable sand and water and after production had fallen to 168 bbls. per day. It was believed the sand and water came from a break in the casing. The added depth sand was cored to 4,433 feet and shale to 4,442 feet. The operators set 9 feet of blank on bottom, 34 feet of .009 gauge 5-inch screen, 100 feet of blank line with packer and sealed to 5-inch casing at top. The well was rocked and it flowed 214 bbls. of oil in 24 hours with a small amount of sand and wash water. Location has been made by the company for No. 1 E. C. Farmer to be drilled to the Frio sand. It is approximately 1,200 feet south of the discovery well on a 50-acre tract in the James Scott Survey. Trans-State Oil Co.'s No. 1 Joseph Fojtek, 2,500 feet west of the J. R. Farmer well, has been completed in the regular Miocene pay for 220 bbls. per day. Seven-inch casing was cemented at 3,753 feet, and the hole is bottomed at 3,769 feet. Midland Oil Co. of Louisiana has made a location on the John Lee Coulter lease, 2,200 feet north and west of the Frio producer, and is ready to start drilling.

Waller County

Capps and others' No. 1 Vaughn, on the San Felipe Dome, Waller County, is being rigged up to pump. It swabbed within 500 feet of bottom and the hole filled up 1,000 feet with oil. It is expected to make a small pumper and will be the first commercial producer for the dome which was discovered by the Gulf Production Co. in 1927. Location is in the John McFarland Survey and the hole is bottomed at 2,966 feet. DeArman Brothers' No. 1 Bains, same survey, about 7 miles from Brookshire, is drilling in sandy shale at 3,575 feet.

Brazoria County

Harrison and Abercrombie's No. 1 Bernard River Land, in the Old Ocean district in Lot No. 23, southern part of Brazoria County, was drilling below 6,859 feet in sandy shale. It is reported it passed up several oil and gas showings between 6,300 feet and the present depth. In the eastern part of the county, 5 miles southeast of Alvin, C. & R. G. Drilling Co.'s No. 1 Frank Truksa is coring below 5,454 feet. Jack Clark's No. 1 J. M. Spear, in Lot 14, in the Pickney Survey, a wildcat shut down for several weeks, has been temporarily abandoned at 5,009 feet.

Orange County

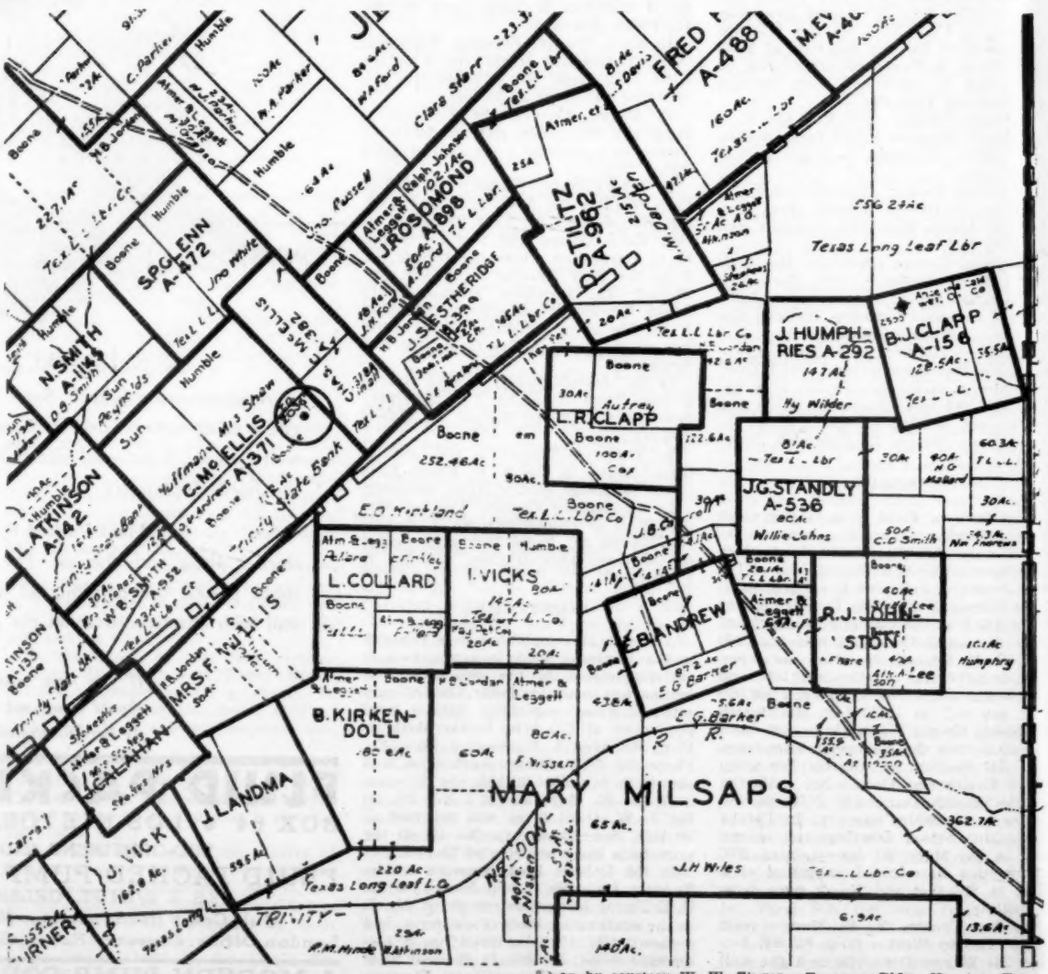
In the Port Neches Field, Orange County, Texas Co. has made two locations offsetting its No. 2-B Polk which opened a new producing sand last week from oil sand encountered from 5,871 to 5,906 feet. Location for the company's No. 3-B Polk estate is 1,200 feet west of the discovery test, and No. 4-B Polk is 1,200 feet north of the deep producer.

Matagorda County

In Matagorda County, Cockburn Oil Co. has taken a five-year lease on a block of 14,000 acres which includes the Northern Irrigation Co. rice farms in the northern part of the county between the Markham Field and the Colorado River. The block includes the J. Crier, W. J. Hurd and Crownover Surveys.

Calhoun County

In the south part of Calhoun County,



Map by courtesy W. W. Zingery, Esperson Bldg., Houston, Tex.

Map of portion of southern Houston County, Texas, and northern Walker and Trinity Counties, showing location of Boone Brothers' wildcat producer (Houston County)

Continental Oil Co.'s No. 1 Moody, a wildcat in Section 6, Block C, between Seadrift and O'Connor, has a stuck drill stem at 6,500 feet and is trying to wash to bottom at 6,625 feet. Two and one-half miles northeast of McCamey in Section 45, V. Garcia Survey. Mills Bennett Production Co. has abandoned No. 1 J. H. Meek and others at 6,829 feet in shale. It topped the Discorbis at 4,646 feet.

Colorado County

Quintana Oil Co.'s No. 1 M. A. Olmstead, a wildcat in the M. Baton Survey, Colorado County, has been abandoned at 5,430 feet. With an elevation of 245 feet, it topped the Hockleyensis at 4,004 feet and the Cockfield at 5,025 feet.

Galveston County

At a hearing at Galveston, the Railroad Commission rejected an application for rules in the Dickinson Field, Galveston County, which would limit the drilling of one well to every 20 acres. This action was taken after property owners claimed the Commission was without power to space the field until oil was discovered and that such actions were confiscatory of property rights. One well to every 20 acres was recommended after Humble Oil & Refining Co.'s No. 1 Maco Stewart, wildcat, blew in as a large gas well and caught fire.

Grimes County

Herbert Holt has made a location for a wildcat in Grimes County, 1,200 feet north of south line and 400 feet west of the east line of 117-acre lease in the Moses Evans Survey, about one-half mile north of Piedmont Station.

Harris County

In the west central part of Harris County, General Crude Oil Co.'s No. 1

(Continued on Page 94)

Wildcat Operations on Gulf Coast

Week Ending September 15

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 6 Alberta Diemar, 525 ft. at right angles from NW line and 357 ft. at right angles from SW line and 425 ft. W of No. 3, Wm. Harvey Sur. Drlg. shale 4,717 ft.

Humble O. & R. Co.'s No. 13 Robert G. Paine, 510 ft. at right angles from NW line and 400 ft. at right angles from NE line of 365-acre tract, Wm. C. White Sur. Location.

Humble O. & R. Co.'s No. 10 J. C. Walton, 586 ft. at right angles from NE line, 375 ft. at right angles from SE line and 225 ft. NW of No. 4, Wm. C. White Sur. Location.

Humble O. & R. Co.'s No. 4-A McCasland, 1,305 ft. E of center cor. of McCasland and Geiske tract, and 565 ft. from N line of lease, Wm. White Sur. Drlg. shale 2,258 ft.

Humble O. & R. Co.'s No. 15 Thompson. Drlg. shale 3,620 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 26 deg. 49 min. W, 200 ft. from SW cor. of Blakely-Winston 560-acre tract, H.T.&B. Sur. Location.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 13. Drill pipe stuck 6,290 ft.

Shell Pet. Corp.'s No. 1-A Schmitt, 357 ft. E and 107 ft. from NW cor. of 146-ac. tract in J. H. Bruner Sur. Coring sticky shale 2,423 ft.

DAMON MOUND—BRAZORIA COUNTY

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur. S.D. 1,280 ft.

H. Wisdom's No. 1 Proctor, 40 ft. out of SW cor. Blk. 1, A. Darst Sur. Waiting on pumping unit; 325 ft. of oil in hole; T.D. 1,630 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 2 Scopel, 200 ft. S of N line of lease and 330 ft. SW of SW line of Belcher lease, Charles O'Donnell Sur. No. 74. Drlg. shale 1,854 ft.

Texas Co.'s No. 13-B Belcher, 330 ft. N, 41 deg. 51 min. E of SW line of lease and 660 ft. N, 48 deg. 9 min. W of No. 10-B, H. N. Little Sur. Location.

Texas Co.'s No. 4 Houston Oil Field Assn., 247 ft. S of N line and 441 ft. W of SE cor. of Lot No. 10, A.C.H.&B. Sur. No. 91. Rig up.

Gulf Prod. Co.'s No. 3 F. H. Colby, 330 ft. from SE and 330 ft. W from N cor. of Lot 19, SE offset to Windsor Oil Co.'s No. 1 Colby, T. Sproggins Sur. Location.

Harrison & Abercrombie's No. 1 Elving, C of Lot No. 15, H.B.&T. Sur. Drlg. shale 1,906 ft.

Texas Co.'s No. 5 C. F. Ewing, 330 ft. S 47 deg. 59 ft. E and 265 ft. S, 41 deg. 36 ft. W of N cor. of Lot 5, H. & N. Little Sur. Drlg. shale and lime 3,650 ft.

Texas Co.'s No. 1 Del Bell, 330 ft. E and 330 ft. S of NW cor. of Lot 11, Charles O'Donnell Sur. Drlg. sand 5,928 ft.

Texas Co.'s No. 5 Houston Oil Field Assn., A.C.H.&B. Sur. No. 9 at C of Lot 22. To plug back T.D. 4,035 ft.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 33-ac. tract in H. Stevens Sur. Drlg. shale and lime 6,640 ft.

Texas Co.'s No. 1 Rash, 330 ft. S, 42 deg. W, and 330 ft. S, 48 deg. E, from NW cor. of lease in Thos. Sproggins Sur. No. A-366. Reaming to set csg. 5,668 ft.

FLEDGER—BRAZORIA COUNTY

Humble O. & R. Co.'s No. 1 Bob McFarland, 525 ft. S, 1,900 ft. W of SE cor. W. C. Carson Sur. Drlg. shale 3,335 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Bowers, 2,400 ft. N line and 1,550 ft. from E line of Jared Groce Sur. Drlg. salt 4,450 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Sterling O. & R. Co.'s No. 3 Hogg, 100 ft. N of No. 2 and 100 ft. from W line of lease. T.D. 6,087 ft.; pulled screen to deepen.

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur. T.D. 5,131 ft.; drlg. plug 5,052 ft.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 2 Fisher, 150 ft. N of No. 1, Wm. Bloodgood Sur. P.B. to 4,368 ft.; sidetracked and drlg. shale 4,378 ft.; T.D. 5,445 ft.

Mills Bennett Prod. Co.'s No. 10 Wilburn, 190 ft. S N line, 150 ft. W of No. 9, Henry Griffith league. Drlg. salt 1,483 ft.

McDaniel Oil Co.'s No. 7 J. F. Wilburn, 150 ft. W of No. 6 and in center of H. Griffith Sur., McAlbert Oil Co.'s 110-ac. strip. Location.

Humble O. & R. Co.'s No. 6-B Kirby, 593 ft. N of S line, 388 ft. E of W line of lease, or 125 ft. N and 288 ft. W of No. 5. Milling out screen; T.D. 4,903 ft.

Humble O. & R. Co.'s No. 7-B Kirby, 200 ft. W of No. 6 in Henry Griffith league. Derrick.

McAlbert Oil Co.'s No. 6 Woodward, C 5-ac tract, W. H. Hodges Sur., 400 ft. W of No. 5. Pumping salt wtr. and some oil 5,154 ft.

Sinclair Prairie Oil Co.'s No. 15-A Wilburn, Henry Griffith league, 150 ft. W of No 17-A and 14 ft. S N line of lease. Coring sandy shale 4,831 ft.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 432 ft. N of S line of lease. Drlg. salt 1,433 ft.

Sun Oil Co.'s No. 10 Chambers, 50 ft. from N and W lines of lease. Drlg. salt 2,235 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 120 ft. W of No. 16. Derrick.

Sun Oil Co.'s No. 22 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well. Drlg. salt 1,599 ft.

Texas Gulf Prod. Co.'s No. 4-B E. W. Barber, 75 ft. S of Moody Corp.'s No. 6-A Barber and 75 ft. from SW line of 38-ac. lease, H. Griffith Sur. Drlg. 917 ft.

Texas Gulf Prod. Co.'s No. 2 Eberspacher 480 ft. from S line and center of strip No. 4. Drlg. shale and lime 4,827 ft.

Texas Gulf Prod. Co.'s No. 5 J. F. Wilburn, 110 ft. W of No. 3 and 50 ft. N of S line of lease, Wm. Hodge Sur. Drlg. sand and boulders 347 ft.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 595 ft. S of N line and 50 ft. W of E line of lease. Drlg. rock 3,656 ft.

Yount Lee Oil Co.'s No. 25 Chambers County, 75 ft. S, 50 ft. W of NE cor. of lease Drlg. salt 3,535 ft.

Yount Lee Oil Co.'s No. 26 Chambers County, 50 ft. N of S line and in line with Chambers Co.'s No. 2 and Sun's No. 9 Chambers. Drlg. salt 3,450 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co. 400 ft. W of No. 24 and in line with Nos 24 and 21. Derrick.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur. Derrick.

Yount Lee Oil Co.'s No. 9 Phillips, 100 ft W of No. 8. Drlg. salt 1,523 ft.

San Jacinto Oil Co.'s No. 4 Blakely, 2,460 ft. W of E line, 190 ft. S of N line of Edwards Drew Sur. Washing to bottom; T.D. 4,695 ft.

BLUE RIDGE—FORT BEND COUNTY

Mills Bennett Prod. Co.'s No. 2 Luscher, 1,950 ft. S and 750 ft. E of westerly NW cor. 500-ac. tract, Thos. Hebermaches Sur. No report.

(Continued on Page 89)

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Five More Completions in Mountain View Field; California Drilling Operations Are Increasing

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Sept. 17.—Drilling operations, which have shown a consistent increase since the first of the year, are holding up in splendid shape and will far outstrip similar activities for 1933. A check indicates that 1934 is approximately two months ahead of last year as far as the quantity of work is concerned and consequently the present year will reflect tangible evidence of improved conditions in California. The record being made is of special significance in view of the fact that a number of fields and deep zones are being held back and only a limited amount of drilling permitted. Instead of one field being allowed to upset the program by promiscuous drilling, the petroleum administrator has allocated both production and development work in new areas in accordance with provisions of the code. As a result of this, drilling operations are rather general throughout the State, although a few fields are a little more active than others.

Operators in the Mountain View Field of Kern County auspiciously celebrated Admission Day, which commemorates California's admission to the Union, by admitting five wells to the select list of producers. Union Oil Co. started the ball rolling by completing No. 2 Kernco and, true to expectations, it showed substantial production. It came in flowing 3,852 bbls. of clean 30.9 gravity oil and 1,855,000 feet of gas per day from 5,546 feet after the hole had been finished with a 6⅝-inch liner, including 76 feet of perforated. No. 2 Kernco, according to the Union's field department, could have shown a much larger production if permitted to do so. This is the third successful well finished in the Mountain View Field by the Union up to the present. The company's Kernco lease looked a way out in the woods when it was acquired just after completion of the Hogan Petroleum Co.'s discovery well, but right now it looks rather good. Singularly enough the Union's first completion did not look promising, but this lease, comprising several hundred acres, has a number of exceptionally good-looking locations available for future work.

The General Petroleum's No. 1 Brantley, like the Union's No. 2 Kernco, came up to expectations by registering substantial production upon completion a few days ago, and this well showed an initial daily production of 3,300 bbls. of clean 29.4 gravity oil from 5,462 feet. It offsets Union's No. 2 Kernco and both appear to be on a par as far as production is concerned. The General Petroleum is rigging up No. 2 Brantley, and since this location looks exceptionally good the company should add another well to its list of producers about Thanksgiving. The Standard, which has not experienced any outstanding success in its development program in this field, completed No. 2 Ranton several days ago, which came in flowing 2,250 bbls. of clean 28.6 gravity oil per day from 5,455 feet after the hole had been finished with a 7-inch liner, including 216 feet of perforated. No. 1 Ranton, on the same lease, was a fairly good well upon completion some time ago, but No. 1 Nichols, the Standard's first project in this field, has not come up to expectations as it has been rather irregular in production. It is at present pumping 135 bbls. of 28.7 gravity oil cutting 7 per cent from 5,630 feet after considerable remedial work. Drilling operations were skillfully done, but the well, due to subsurface conditions, did not have sufficient kick to produce.

Oil Measures

The Mountain View Field requires very careful correlation work as the oil produced comes from an accumulation along a fault extending from northwest to southeast with the most prolific production being found in close proximity to the fault. The most productive area in the field is that section along the fault in the most westerly end of the district. The Union's No. 1 Kernco appears to define the outer limits of production in the western end of the field, but this may not be the case as the well ran into considerable water trouble and for this reason does not represent a true picture of what might actually exist. A number of operators are of the opinion that the western limits of production are at least another 2,500 feet beyond No. 1 Kernco. Sovereign Oil Co. recompleted No. 2 S. J. Development a few days ago after redrilling and cleaning out the hole to 6,163 feet, and it was returned to production flowing 2,026 bbls. of clean 33.4 gravity oil and 1,900,000 feet of gas per day. Otis Hoyt, who drilled a new well along the bank of the Eastside Canal in conjunction with other operators holding adjacent acreage, has brought this project into production doing a little better than 500 bbls. per day from 5,624 feet after landing an 8⅝-inch water string at 5,380 feet.

Judging by the status of several other wells in this field, it is logical to assume that the next week or 10 days will see additional projects listed for completion. No. 1 Morris of the Barnsdall, for instance, looks rather promising at 5,616 feet, although the production of this new well is not expected to set any new records for quantity due to the well's structural location. The Barnsdall is building a new rig for No. 1 Young, which will be drilled in Section 31-30-29, and spud should be made within 10 days. Hogan Petroleum Co., first operator in the Mountain View Field to develop commercial production, topped the Santa Margarita in No. 4 Porter Day at 6,111 feet and should be in a position to make a production test shortly as the bit was in the oil sand a day or so ago at 6,165 feet. In the meantime, the company has started swabbing operations on No. 3 Wharton, which has been bottomed at 6,287 feet, and this well should be on production within a few days. Mohawk Oil Co. should also list a new well in this field within the next week as its No. 2 McKeehan is in the pay at 5,496 feet, and another, No. 1 Vineland, looks exceptionally promising for production at 5,720 feet.

Edison

The Edison Field of Kern County, about 5 miles east and a little south of the Mountain View Field, does not look quite as hot as it did a few weeks ago, although the area will continue relatively active for some time to come. The coring of granite in Ohio Oil Co.'s No. 1 Cauley in Section 36-30-29 at 2,173 feet and schist in Mohawk Oil Co.'s No. 1 Weichelt at 2,370 feet has taken the edge off some of the optimism. Both wells are being prepared for abandonment and this will remove both areas from the potential list. The Edison area still remains attractive in certain districts and will probably yield a number of fairly good wells at shallow depths. Shell Oil Co. finished No. 2 Duff in Section 15-30-29 a few days ago, and it was brought in doing 430 bbls. of 16.1 gravity oil per day from 2,974 feet. Monterey Exploration Co.'s No. 1 Nozu, a recent completion in this field, sanded up early in the week and has been cleaned out to bottom, 2,934 feet, preparatory to being recompleted. A. T. Jergins has recompleted No. 1 Daugherty, which was deepened to 1,783 feet and then plugged back to 1,650 feet, and it was returned to production doing 234 bbls. per day.

Kettleman Hills

Standard Oil Co. chalked up another new well in the Kettleman North Dome Field early in the current week when No. 26-29-J was brought in flowing 8,840 bbls. of clean 37.2 gravity oil and 24,750,000 feet of gas per day. It was bottomed at 8,300 feet and finished with a 6⅝-inch liner, including 925 feet of perforated, which was landed at 8,290 feet. Previous to this completion, the Standard made a production test on No. 2-35-Q, which had been bottomed at 7,485 feet, and it showed a potential of 1,465 bbls. of 38.4 gravity oil and 4,140,000 feet of gas per day. Both of these new wells were shut in subsequent to completion in order to conform with curtailment requirements. The Standard is swabbing No. 43-29-J, which has been completed at 8,515 feet and should be tanking oil within 24 hours.

The Kettleman North Dome's new well, No. 56-8-Q, a deep test in the North Dome, has reached 10,080 feet and the outlook is not any too promising as the log is devoid of any substantial showings down to this point. This well is out on the north flank in the twilight zone between the red and blue lines in Section 8-22-18, and the failure to log favorable showings is somewhat disappointing. Kenda anticipated deep drilling, however, and will continue to drill ahead in order to make a conclusive test as the outcome of drilling is expected to have an important effect on acreage in the immediate vicinity. As time goes on and with each additional completion shedding further light on subsurface conditions it becomes more evident that the Huffman area will prove the most prolific section of the North Dome. This area has already yielded in excess of 25,000 bbls. of crude oil per acre and is still going strong with casing pressures on flowing wells averaging around 1,250 pounds. It is safe to say that it would have greatly exceeded 100,000 bbls. per acre up to the present if operators had been able to produce their wells to capacity instead of being obliged to reduce production to a relatively small percentage of their potential.

Union Oil Co. killed No. 6 King, a recent completion in the Huffman area, and will deepen it in order to take in the additional thickness of formation available. This well was given a preliminary production test from 8,060 feet to determine what the upper 100 feet of formation would do, but the well was good for only 1,375 bbls. of clean 37.9 gravity oil and 673,000 feet of gas per day. Drilling of No. 8 King will consequently be delayed pending recompletion of No. 6. Superior Oil Co. has killed No. 8 Huffman, finished in the upper zone a few weeks ago, when mechanical trouble prevented an Eocene test, and the company will perforate the 7-inch at 7,430-7,575 feet in order to open additional formation. The Petroleum Securities has concluded drilling operations on No. 58-19-V in the Middle Dome of Kettleman Hills, and this potential producer will be given a production test within a few days as the 4½-inch liner is being run in preparatory to completion. This well, like its two predecessors in the Middle Dome, encountered the high head

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Sept. 2		Aug. 26			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Fuel oil	73,980	10,569	145,622	20,803	9,812,064	869,619
Diesel and gas oil	.....	.....	21,119	3,017	1,021,175	1,200,559
Gasoline	277,028	39,573	.....	.....	5,242,603	6,954,733
Kerosene	5,931	847	.....	.....	654,011	568,895
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	75,318
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	77,955	11,136	261,632	37,376	5,369,368	5,337,020
Fuel oil	120,071	17,153	316,819	45,260	8,688,319	5,727,274
Diesel and gas oil	125,586	17,941	.....	.....	2,939,031	2,286,023
Gasoline	18,992	2,713	214,268	30,610	2,951,931	4,191,378
Kerosene	.....	.....	.....	.....	1,274,206	1,392,267
Other finished oil	.....	.....	.....	.....	3,529	12,086
Other unfinished oil	.....	.....	24,431	3,490	210,500	24,547
Coastwise-domestic—						
Crude oil	206,135	29,448	.....	.....	5,834,340	5,172,264
Fuel oil	195,155	27,879	145,714	20,816	6,177,402	6,718,421
Diesel and gas oil	13,735	1,962	11,641	1,663	517,567	850,632
Gasoline	270,385	38,626	581,236	83,034	8,838,893	8,748,868
Kerosene	2,729	390	1,745	249	109,662	143,597
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	443,113	280,531
Gasoline	71,840	10,263	.....	.....	290,825	702,977
Kerosene	.....	.....	.....	.....	276,412	482,430
Lubricants	8,195	1,171	.....	.....	34,695	24,366
Foreign exports—						
Crude oil	.....	.....	154,076	22,011	1,330,081	1,320,041
Fuel oil	30,794	4,399	193,147	27,592	1,473,812	886,049
Diesel and gas oil	18,218	2,602	81,288	11,613	1,042,267	824,450
Gasoline	208,430	29,776	74,128	10,590	2,411,704	2,914,347
Kerosene	2,141	306	118,737	16,962	789,174	632,112
Lubricants	6,883	983	27,694	3,956	143,157	86,530
Other finished oil	.....	.....	.....	.....	2,760	3,745
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic—						
Fuel oil	188,080	26,869	261,021	37,289	4,051,629	2,488,512
Diesel and gas oil	.....	.....	13,124	1,875	119,036	179,250
Gasoline	126,646	18,092	156,942	22,420	3,413,493	2,826,221
Kerosene	.....	.....	.....	.....	64,805	85,106

water zone, but is believed to have overcome this problem as a satisfactory water shutoff was secured on the 8⅛-inch water string landed and cemented at 7,616 feet. Top of the productive Temblor was logged at 7,619 feet and the outlook is favorable for commercial production unless the company encounters mechanical trouble. This well will remain the property of the Petroleum Securities until all development costs, including the drilling of No. 1 Burbank, have been liquidated, at which time it will revert to the Middle Dome Corp. The same procedure will prevail in the case of the Standard's No. 6-29-V, the first commercial producer to be finished in the Middle Dome.

Lost Hills-Belridge

Union Oil Co. had the misfortune to lose a string of drill pipe and a reamer in No. 18 Belridge, a new well in the North Belridge Field, just a short time before it was scheduled to be completed. Drilling operations had been concluded and the hole was being reamed in order to iron out some tight places that the liner might be run in without difficulty when the mechanical problem developed. Several days have elapsed since this happened and the company is still held up. It may be necessary to cut out the pipe in sections, in which event the outcome of this well will remain in doubt. No. 18 Belridge, bottomed at 8,523 feet, was the best looking well drilled in the North Belridge Field up to the present, and it was expected it would establish a new record for production upon completion.

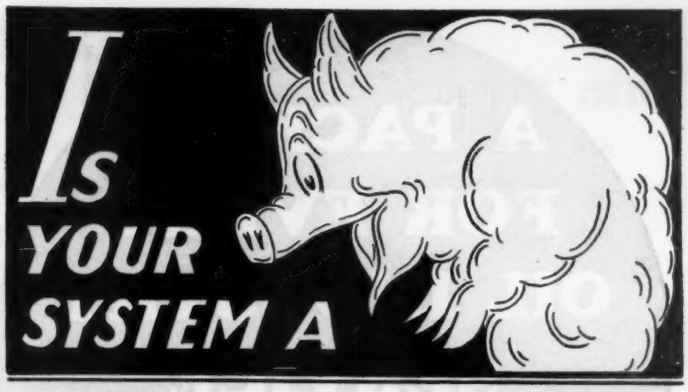
The plan for orderly development of the North Belridge Field as approved by the petroleum administrator provides that not more than one well to each 10 acres may be drilled into the Wagon Wheel zone, which is believed to be of Eocene age. This plan is being rigidly adhered to by all operators who are, in addition to this provision, absorbing an additional degree of curtailment in the overlying Temblor. Belridge Oil Co. is making splendid progress in No. 16-35, which probably will be finished in the deep zone within 60 days. The Continental and Associated are also making good footage in their respective projects in this field. The Lost Hills Field and the South Belridge Field are dormant at present due to suspension of drilling activities on No. 1 Williamson of the Associated in the former area and No. 1 Berry of the General Petroleum in the latter district. No. 1 Berry, bottomed at 11,377 feet, has been standing suspended for the past several weeks, and it is doubtful of any further work will be undertaken on this project during the current year.

Montebello

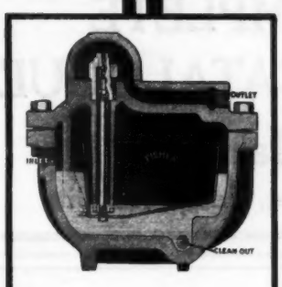
The productive limits of the deep Cruz zone in the Montebello Field of Los Angeles Basin, judging by development work undertaken up to the present time, will be rather limited in scope, although there is a bare possibility that deep production may be found in the area immediately adjacent to the eastern end of the field. This possibility is supported by the fact that the top of the Miocene has been logged at a greater depth in several wells west of the Universal Consolidated's discovery well. The wide discrepancy in well logs, due to unconformity of

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
General Pet., No. 9 Capitan, Santa Barbara Co.	32- 5-30	3,084	pump 180 B/D
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	32- 5-30	1,883	will deepen
Petroleum Sec., No. 1 Los Alamos, Santa Barbara Co.	6- 7-32	3,396	br. sh. drilling
Barnsdall, No. 2 Gate Ridge, Santa Barbara Co.	9- 8-32	....	grade road
Royalty Ser. Corp., No. 1 Los Alamos, San.a Barbara Co.	35- 9-32	1,694	sd. sh. drilling
Union, No. 2 Santa Maria, Santa Barbara Co.	24-10-34	2,389	pull casing
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	28- 7-34	2,981	suspended
Signal Oil & Gas Co., No. 1 Elwood, Santa Barbara Co.	tideland	1,124	sd. sh. drilling
Barnsdall-Rio Grande, No. 8 Doty Elwood, S. Barbara Co.	15- 4-29	5,732	repair pipe
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	3,400	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	3,462	hd. sh. drilling
North American, No. 1 Goleta, Santa Barbara Co.	10- 4-28	984	sd. sh. drilling
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	4,850	redrlg. 2,115
Leingang, G., No. 1 Cuyama, Santa Barbara Co.	32-10-25	rig	suspended
Cuyama Valley Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	4,196	hd. sd. drilling
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	redrlg. 5,750
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	6,625	redrlg. 6,060
Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	3,309	formation test
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,187	O. S. drilling
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	1,128	reaming
Paloma Oil Co., No. 1 Santa Susana, Ventura Co.	12- 2-18	331	sd. sh. drilling
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	1,016	fish tubing
American Drlg. Co., No. 1 Simi, Ventura Co.	6- 2-17	903	pumping test
Macrate, A. N., No. 1 Ojai, Ventura Co.	27- 4-22	5,537	suspended
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	18- 4-23	1,070	hd. sh. drilling
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	6,475	sd. sh. drilling
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	2,355	sd. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	2,300	suspended
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	7,370	fishing D/P
Standard Oil Co., No. 1 McKittrick, Kern Co.	15-30-22	4,204	hd. sh. drilling
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	5,781	hd. sd. drilling
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	temp. susp.
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	8,523	D/P froze
Standard Oil Co., No. 1-A North Belridge, Kern Co.	36-27-20	mtl.	building rig
Associated Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	7,858	pl. 6,850; fille
Amerada Pet., No. 1 Blackwells Corner, Kern Co	17-26-19	1,012	sd. sh. drilling
Home Corp., No. 1 McFarland, Kern Co.	16-26-27	rig	suspended
Ohio Oil Co., No. 1 McVan, Kern Co.	22-27-27	1,113	sd. sh. drilling
Pell Oil Co., No. 1 McVan, Kern Co.	14-27-27	....	material
Union Oil Co., No. 3 Mountain View, Kern Co.	15-30-28	5,546	2,750 B/D
Texas Co., No. 1 Mountain View, Kern Co.	14-30-28	2,602	sd. sh. drilling
General Pet., No. 1 Mountain View, Kern Co.	14-30-28	5,462	O. S. cemented
Barnsdall, No. 2 Mountain View, Kern Co.	32-30-29	5,616	O. S. drilling
Hogan Pet., No. 5 Mountain View, Kern Co.	32-30-29	6,287	prod. test
Standard Oil Co., No. 3 Mountain View, Kern Co.	23-30-28	1,330	sd. sh. drilling
Hoyt, Otis, No. 1 Mountain View, Kern Co.	19-30-29	5,624	600 B/D
Shell Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	5,280	gr. sd. drilling
Gilco, Inc., No. 2 Edison, Kern Co.	23-30-29	mtl.	bldg. rig
Jergins Trust, No. 1 Edison, Kern Co.	22-30-29	3,815	suspended
Jergins Trust, No. 2 Edison, Kern Co.	14-30-29	1,783	plug 1,650
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	3,602	sd. sh. drilling
Shell Oil Co., No. 2 Edison, Kern Co.	15-30-29	2,974	testing W.S.O.
Barnsdall, No. 1 Edison, Kern Co.	26-30-29	2,477	plug 2,340
Centralia Oil Co., No. 1 Edison, Kern Co.	26-30-29	2,317	recemented
Ohio Oil Co., No. 1 Edison, Kern Co.	36-30-29	3,112	gran.: to P/B
Petrol Prod. Co., No. 1 Edison, Kern Co.	35-30-29	1,896	sd. sh. drilling
Mitchell-McMillan, No. 1 Edison, Kern Co.	8-30-29	rig	suspended
Lee Oil Co., No. 1 Edison, Kern Co.	5-30-29	631	sd. sh. drilling
Commanche Oil Co., No. 1 Commanche, Kern Co.	15-32-29	4,326	suspended
Tejon Ridge Oil Co., No. 1 Commanche, Kern Co.	23-32-29	1,184	sd. sh. drilling
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	28-12-11	4,400	sd. sh. drilling
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	6,138	redrill 5,450
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	redrill 8,760
Western Gulf, No. 2 S. P., Fresno Co.	11-17-15	4,792	sd. sh. drilling
Farrel Pet., Well No. 1 San Luis Obispo Co.	18-31-12	1,150	sd. sh. drilling
Willett Oil Co., No. 2 Cholame, San Luis Obispo Co.	10-25-15	2,202	suspended
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings Co.	21-22-20	1,950	suspended
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings Co.	21-22-20	rig	suspended
Armadillo Oil Co., No. 1 Tulare Lake, Kings Co.	32-22-20	1,760	suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	812	sd. sh. drilling
Weller, Carl, No. 1 Tulare Lake, Kings Co.	11-23-16	1,420	suspended
Mastadono Oil Co., No. 1 Tulare Lake, Kings Co.	27-24-28	rig	suspended
Trico Oil & Gas Co., No. 1 Atwell, Kings Co.	33-24-22	3,713	suspended
Trico Oil & Gas Co., No. 2 Atwell, Kings Co.	3-25-23	rig	rigging up
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16-1	5,615	hd. sd. drilling
Milham Exploration Co., No. 2 Tracy, San Joaquin Co.	24- 3-4	1,122	abandoned
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	7,680	sd. sh. drilling
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	1,432	hd. sh. drilling



STEAM HOG?



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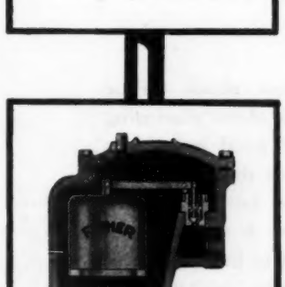

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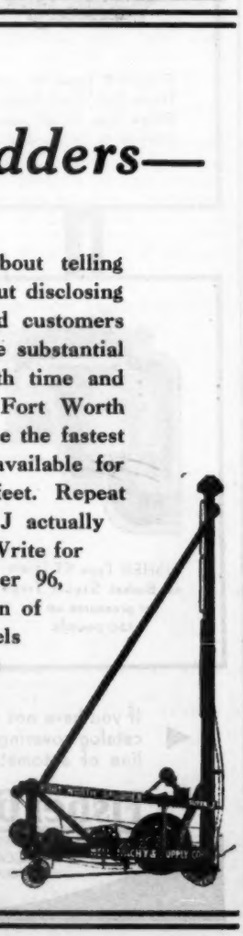

Well Machinery & Supply Co.

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subsurface strata, is exemplified by the inability of engineers to project contours that can be interpreted. Production contours of the upper zone curve around the eastern end of the field in a normal manner but contours predicated on the top of the deep Miocene overlap and run in the opposite direction.

The top of the Miocene, corrected for elevation, was encountered in the Universal Consolidated's No. 1 Cruz at 5,459 feet, and although this well is in the extreme eastern end of the field, the top of the Miocene was logged higher in this hole than in any other up to the present. The Standard picked up this marker at 5,945 feet in No. 73 Baldwin and at 5,942 feet in No. 75 Baldwin, both of which are more favorably located than the discovery well as far as the upper zone is concerned. Neither of these wells, which are located west of No. 1 Cruz, has developed production, notwithstanding that the latter is down 7,600 feet, or approximately 600 feet deeper than the discovery well. Fullerton Oil Co. logged the top of the Miocene at 5,525 feet and St. Helens Petroleum got it at 5,540 feet. The former topped the oil sand in No. 28 McGinley at 7,000 feet and the company is making preparations to conduct an early production test. The Texas Co. encountered the top of the Miocene at 5,590 feet in No. 12 Baldwin and at 5,500 feet in No. 4 Barry. The latter well was given a production test a few days ago, but it was good for only 75 bbls. of 36.7 gravity oil per day on the beam from 7,025 feet.

Mount Poso

Three wells were finished in the Mount Poso Field of Kern County this week, although only one of them had actually completed its initial daily production test. This was Union Oil Co.'s No. 14 S. & M., which was finished pumping 815 bbls. of clean 16.8 gravity oil per day from 1,725 feet after the hole had been completed with a 6⅝-inch liner carrying 55 feet of perforated. After finishing the well, the Union spudded in No. 13 on the same lease. Shell Oil Co. completed two wells in this field but neither of them had completed their initial tests. No. 8 Vedder, in Section 9-27-28, is showing considerable sand and may require a clean-out job before being finally listed as a completed well at 1,755 feet. No. 10 Security, bottomed at 1,769 feet and finished with a 6⅝-inch liner carrying a combination perforation job, looks good for about 600 bbls. per day but the actual tank gauge will not be available for another 24 hours. The Shell's No. 12 Vedder is being rigged to pump, and this well, along with the other two projects, should be among the list of completions in this field next week.

Capitan

The General Petroleum, discoverer of the Capitan Field of Santa Barbara County, completed No. 9 Erburu early in the week, which was brought in on the beam pumping 179 bbls. of clean 43.7 gravity oil from 3,084 feet after the hole had been plugged back from 3,573 feet. The Shell, which recently made a preliminary production test on No. 1-3 Covarrubias in this field, is making preparations to redrill and deepen the hole in order to develop oil production. This well came in as a gasser doing approximately 10,000,000 feet of gas per day from 1,883 feet. The plan for orderly development of the Capitan Field provides that not more than one well may be drilled to each 7.8 acres and that not more than 11 wells may be drilled to the upper zone or more than nine wells to the lower zone during 1934. For the next year the plan provides that four wells may be drilled to the upper zone and a like number to the deep zone prior to June 16.

Operators in the Elwood Field of Santa Barbara County who are privileged to drill 20 wells per year into the deep Sespe are showing a commendable spirit in refraining from aggressive development of this horizon. In the Goleta Field, operators are drilling three wells to the gas zone in the hope that there might be a high demand for natural gas during the coming winter season. Last year, due to unusually mild weather, the demand for natural gas for heating purposes was below expectations. The Santa Barbara Field is due to break out with another group of new wells in the Mesa district as there are a number of potential producers either standing cemented in the pay or being prepared for early production tests. These wells require less than a month from spud to completion and consequently they are very little trouble to bring on production.

Rincon

Chanslor-Canfield-Midway Oil Co. recompleted No. 3-B Hobson in the Rincon Field of Ventura County early in the week, and it was returned to production flowing 220 bbls. of 26.1 gravity oil and 990,000 feet of gas per day from 4,027 feet. In the South Mountain Field, the Texas Co. made a formation test on No. 128 at 3,309 feet, but the result was not any too satisfactory and the hole will probably be deepened. This well is in the Sespe. Operators in the Ventura Avenue Field are going along in a normal manner and neither the Associated nor Shell have shown any inclination to increase the scope of drilling. Property Service Corp., which is drilling an outpost east of Hall's Canyon in the eastern end of the field, is down 6,475 feet in No. 3 Dabney Lloyd without logging anything more than ordinary showings. Continental Oil Co. is redrilling No. 3 Grubb in the San Miguelito Field of Ventura County at 6,100 feet following the development of a crooked hole. Operators in this field are limited to one new well per year in accordance with provisions of a plan for orderly development approved by the petroleum

(Continued on Page 78)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Clayton, G. L., No. 1 Cerritos, Los Angeles Co.	31- 3-12	6,698	fishing D/P
Kelly & Son., No. 1 Torrance, Los Angeles Co.	7- 4-13	6,433	C/O to deepen
Woodward Oil Co., No. 1 Athens, Los Angeles Co.	12- 3-14	5,543	suspended
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-14	4,037	cleaning out
East Santa Fe Oil Co., No. 1 Inglewood, Los Angeles Co.	16- 2-14	mtl.	foundation
Scientia Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	3,806	plug 3,375
Plymouth Oil Co., No. 1 Inglewood, Los Angeles Co.	8- 2-14	5,062	prod. test
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	7,917	test W.S.O.
Fourl, C. W., No. 1 Del Rey, Los Angeles	27- 2-15	2,412	sd. sh. drilling
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	2,661	rigging up
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	7,447	suspended
Texas Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,025	pump 70 B/D
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,601	hd. sd. drilling
St. Helens, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	6,783	hd. sd. drilling
Fullerton Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,925	O. S. will test
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	....	material
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	10- 2-9	3,501	br. sh. drilling
Barstow Oil Co., No. 2 Saugus, Los Angeles Co.	35- 5-16	2,208	gr. sd. drilling
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	3,100	hd. sd. drilling
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	3,985	redrill 3,300
Explorers Drlg. Co., No. 1 Fairview, Orange Co.	9- 6-10	945	recemented
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,485	fishing D/P
B. & B. Oil Co., No. 1 Newport, Orange Co.	19- 6-10	rig	suspended
Flint & Collins, No. 1 Costa Mesa, Orange Co.	14- 6-10	2,586	hd. sh. drilling
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3-9	3,551	br. sh. drilling
Bridger, J., No. 1 Coyote, Orange Co.	15- 3-10	5,410	suspended
Rubens, St. No. 2 East Coyote, Orange Co.	19- 3-9	457	sd. sh. drilling
Great American Pet., No. 1 Chino, San Bernardino Co.	13- 2-8	2,642	suspended
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2-8	3,152	fishing D/P
Great American Pet., No. 3 Chino, San Bernardino Co.	7- 2-8	rig	rigged up
Tehama Pet., No. 1 Santa Ana Canyon, S. Bernardino Co.	33- 3-8	2,496	br. sh. drilling
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18-2	4,795	gr. sh. drilling
Evert Drlg. Co., No. 1 Camp Kearny, San Diego Co.	29-15-3	....	location

Field Work on Increase in North Louisiana and Arkansas; Deep Failure in Mississippi Field

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Sept. 17.—The active drilling rigs throughout this division show a decided increase over the past few weeks, both in the proven and wildcat areas, but the completions were few and none of the important wildcats were on test during the past seven-day period. With the continued drought broken in most of the districts, numerous wells that have been shut down for lack of water have resumed operations and this condition is expected to lend impetus to a fall drilling campaign extending over a wide area.

NORTH LOUISIANA

With the small total of six completions, this district reported only two successes, one gas well and one oil well with four dry holes. The Texas Co. completed its second small gasser in as many weeks in the shallow Blanchard Field in Caddo Parish. Its No. 2 Noel fee, Section 2-18-16, had an initial flow of 2,000,000 feet of gas with 345 pounds rock pressure from 934 feet. On the eastern flank of the Zwolle Field, Sabine Parish, George L. Pace's No. 1 J. C. Ritter, Section 26-8-12, is flowing 125 bbls. daily from 2,389 feet. In the Converse area, Sabine Parish, the Pearl Oil Corp.'s No. 1 Bellieu & Carter, Section 21-9-13, was finally abandoned as dry at 2,070 feet. The well was treated with acid after encountering a good show of oil at 1,980 feet, but failed to make a commercial well after deepening. J. S. Tuffree's No. 1 McGill, Section 1-10-13, DeSoto Parish, was abandoned in salt water at 2,125 feet. The Sarepta-Springhill area of Webster Parish was given a setback with two dry holes out of as many tests. The Abney Oil Co.'s No. 3 Slack, Section 36-23-11, continued to make excessive amounts of salt water and was abandoned at 2,714 feet. The well is about one-fourth of a mile from a number of producing wells in that area, and was cemented back to 2,960 feet from the total depth with considerable oil showing, but the excessive salt water flow ruined its chances for a commercial well. A rank wildcat in that vicinity, M. J. Kissick's No. 1 B. M. Cook, Section 2-22-11, cut 4 feet of likely looking sand from 2,697 to 2,701 feet, but developed salt water on test and was abandoned at the latter depth.

With only six new locations in this district, all of them in proven or semi-proven territory, attention was centered during the past week on a number of wildcats that are nearing the pay horizon. E. T. Oakes' No. 1 Bryant and others, Section 30-13-15, a deep test on the western border of DeSoto Parish near the East Texas line, is being closely watched. Liner has been set and at this writing the well is bailing to test from a total depth of 5,408 feet. The wildcat is located about 7 miles north and east of a gas well which blew in near Joaquin in Shelby County, East Texas, in 1931. The depth of the gas well was slightly below 3,800 feet. Other active North Louisiana wildcats follow: DeSoto Parish, Bayou Pierre Oil Co.'s No. 1 B. Y. Wenple, Section 14-12-11, drilling at 1,200 feet, and in the same section DeSoto Petroleum Co.'s No. 1 Wemple, drilling at 700 feet; Century Oil & Drilling Co.'s No. 1 J. M. Morton, Section 27-11-14, drilling at 1,350 feet; Hester and others' No. 1 Alston, Section 11-11-16, drilling at 1,950 feet; Texas Co.'s No. 13-A Wemple, Section 1-12-12, has sidetracked stuck drill stem at 3,544 feet and will make a drill stem test above this depth at 3,424 feet. In East Carroll Parish, the United Gas Public Service Co.'s No. 1 Giddens, Section 12-19-10e, has set 7-inch casing at 2,338 feet.

Caddo Parish, the oldest producing area in North Louisiana, has more than 15 active rigs. Two of these are deep wells for gas in the Rodessa area in the northwestern part of the parish. The Arkansas-Louisiana Pipe Line Co.'s No. 1 R. L. Parker, Section 26-23-16, has set 7-inch casing at 5,447 feet, and the United Gas Public Service Co.'s No. 1 Ned Christian, Section 23-23-16, is drilling at 4,993 feet. The latter company is also deepening one of its old wells in the field from the 5,500-foot level to the lower sands to increase its production. Other rigs in Caddo Parish are scattered over a wide area in the vicinity of old proven fields.

ARKANSAS

This district failed to report either a completion or new location during the past seven-day period. One new well recently staked in Bradley County, the Seton Oil Co.'s No. 1 C. H. Murphy, Section 34-15-10, has spudded in and set 10-inch surface casing at 185 feet. The only well tested during the week, Arkansas Drilling Co.'s No. 1 Jones, Section 11-14-24, in Hempstead County, developed salt water on drill stem test from 2,000 to 2,013 feet and is drilling ahead at 2,570 feet. The top of the red beds was logged in the well at 2,108 feet. The situation in Lafayette County remains about the same as last week with the exception of one well. R. H. Neely's No. 1 Flemming, Section 31-18-25, topped the chalk at 2,320 feet and is drilling at 2,656 feet. Douglas Lown's No. 1 Camp, Section 14-15-23, has resumed activity and is coring shale at 2,805 feet. C. V. Lenz' No. 1 Houston, Section 19-15-25, is temporarily shut down at 2,905 feet, and Benedum & Trees' No. 1 Bodcaw Lumber Co., Section 19-16-23, is still trying to loosen stuck drill stem from 3,825 feet. In Ouachita County, J. S. Carnes Drilling Co.'s No. 1 D. Scott, Section 18-14-18, cored 5 feet of sandy shale and 2 feet of oil sand from 1,828-35 feet and is arranging to test. A Nevada County test, on the flank of the old Stephens Field, O. F. Whittaker's No. 1-B Guttry, Section 2-15-20, is waiting on standard rig to pump.

The Miller County Field has two wells on the sand, arranging to set casing to test, and three wells waiting on standard rig to pump. A wildcat northwest of the producing area, King Oil Corp.'s No. 1 C. H. Schroder, Section 24-14-28, is drilling at 2,433 feet after having been shut down for several weeks on rig repairs.

MISSISSIPPI

Another deep test on the flank of the Jackson gas field proved to be a failure. Love Petroleum Co.'s No. 1 Pearl River Valley Lumber Co., Section 15-6n-2e, Rankin County, was dry and abandoned in red beds at 4,266 feet. The well logs the top of the chalk at 3,060 feet, drilling in black sandy shale at 3,630 feet and sand at 4,130 feet. This was the only completion reported from this district. One new operation in Monroe County, P. J. McAlpine's No. 1 Crook, Section 4-13s-18w, has spudded in and is drilling at 175 feet.

In Clarke County, the Clarke County Oil & Gas Co. has temporarily abandoned its No. 1 Kirkland, Section 10-2n-16e, at 4,000 feet in the Eutaw horizon. The Snow Black Petroleum Co.'s No. 2 Watson, Section 24-7n-13w, Jones County, is temporarily shut down in sand at 3,860 feet, and in Lamar County, Hix & Germany's No. 1 Newman Lumber Co., Section 21-4n-15w, is drilling in sandy shale at 3,335 feet. Two new tests have recently spudded in in as many counties. Bob Dalton's No. 1 Bounds, Section 34-7n-15e, is drilling in shale at 560 feet, and in Winston County, Jack Vale and others' No. 1 Moody, Section 3-13n-14e, has rigged up and shut down at 20 feet.

EAST TEXAS BORDER COUNTIES

In Cass County, Eastern Texas Production Co.'s No. 1 J. S. Baker, Jesse Walling Survey, has set 10-inch surface casing at 112 feet and shut down for water at 2,703 feet. T. B. Smylie's No. 1 Henderson, R. Bennington Survey, Marion County, is also shut down for lack of water at 2,300 feet. Three rigs are active in Panola County, and in Shelby County, Cliff Stovall is arranging to resume drilling on his No. 1 Pickering Lumber Co., C. H. Patterson Survey, which has been shut down since setting surface casing in June of this year.

Daily Gross Production

Estimated daily gross production all companies for week ending September 14:

NORTH LOUISIANA

Bellevue	260
Caddo, light	4,465
Caddo, heavy	1,585
Converse	1,855
Cotton Valley	500
DeSoto and Red River	1,425
Elm Grove	410
Haynesville	3,760
Holly	155
Homer	2,650
Pleasant Hill	200
Sarepta-Carterville	650
Urania	3,170
Zwolle	3,020
Total	24,105

SOUTH ARKANSAS

Champagnolle	1,150
El Dorado	2,400
Lisbon	160
Miller County	1,615
Nevada	375
Smackover, light	2,310
Smackover, heavy	19,455
Stephens	610
Urbana	2,510
Total	31,285

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
S.D. 1,700 ft.

Haas & Stokes' No. 1 Lindstrum Land Co., 690 ft. S, 930 ft. E, NW cor. Sec. 24-1n-6e.
Set 12-in. 40 ft.

BIENVILLE PARISH

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Set 16-in 142 ft.

Tooke & Reynolds' No. 1 Sprawler & Robinson, N and W, SE cor. SW NE Sec. 3-15-16.
Rigging up.

BOSSIER PARISH

Bossier O. & G. Co.'s No. 1 Sherrill, 300 ft S and W, NE cor. Sec. 13-9-12.
S.D.; W.O. 2,361 ft.

Dickinson & Pearce's No. 1 Buckelew, 400 ft. N, 55 ft. W, SE cor. NE NE Sec. 16-19-11.
Set 10-in. 100 ft.; set 6-in. 320 ft.; S.D. W.O. 445 ft.

Dickinson & Pearce's No. 1 Taylor, 140 ft. S and W, NE SW NE Sec. 16-19-11.
Set 6-in. 408 ft.; S.D.W.O. 425 ft.

Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. for water 1,126 ft.

McKinney & Stewart's No. 1 Nattin, 470 ft. W, 620 ft. S, NE cor. Sec. 22-22-14.
S.D. 1,973 ft.

Producers O. & G. Co.'s No. 1 Weiner, 660 ft. N and W, SE cor. Sec. 7-17-11.
S.D. 3,984 ft.

Triangle Drlg. Co.'s No. 2 Skannell Unit, 990 ft. N, 660 ft. W, SE cor. Sec. 14-17-12.
Set 13⅜-in. 308 ft.; drlg. 2,304 ft.

United Gas Pub. Service Co.'s No. 1 Herold Unit, 50 ft. S and W, NE cor. SW SE Sec. 13-17-12.
Rigging up.

CADDO PARISH

Ark.-La.-Tex. O. & G. Co.'s No. 1 Simon, 330 ft. N and E, SW cor. Sec. 15-20-15.
S.D. 2,010 ft.

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E, 660 ft. N, SW cor. Sec. 13-22-16.
S.D. for water, 2,540 ft.

S. Bender's No. 1 Starr, 150 ft. N, 195 ft. E. SW cor. SW Sec. 26-20-16.
Drlg. 2,215 ft.

Blunt et al's No. 1 Perry, 200 ft. S and E, NW cor. SE SW Sec. 3-20-16.
S.D. 956 ft.

Burkett O. & G. Co.'s No. 1 Lindheim, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14.
S.D. 1,046 ft.; repairing rig.

Capitol O. & G. Co.'s No. 1 Noel Est., 300 ft. S and E, NW cor. NE Sec. 12-20-16.
S.D. 450 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 1,138 ft.

J. T. Reese's No. 1 Murray Est., Sec. 28-21-15.
Set 10-in. 64 ft.; drlg. 1,980 ft.

Shreveport Oil Corp.'s No. 1 Muslow, 412 ft. N, 560 ft. E, SW cor. NW Sec. 4-20-15.
Drlg. 1,895 ft.

Simplex Oil Co.'s No. 9 Youree-Randolph, 660 ft. S and W, NE cor. SE Sec. 13-20-15.
P.B., set 6-in. 1,778 ft.

Simplex Oil Co.'s No. 1 Glassell, 330 ft. S and E NW cor. Sec. 33-20-15.
Drlg. 2,240 ft.

Texas Co.'s No. 2 Noel fee, 660 ft. N and E, SW cor. NW SW Sec. 2-18-16.
Comp. 2,000,000 ft. gas 934 ft.

Texas Co.'s No. 1 Noel fee, 330 ft. N, 660 ft. E, SW cor. Sec. 2-18-16.
Set 8-in. 20 ft.; comp. 836,000 ft. gas 968 ft.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N, 200 ft. W, SE cor. NW NE Sec. 18-11-3e.
Drlg. 3,295 ft.

DE SOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 25-11-13.
S.D. for wtr. 3,030 ft.

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
Drlg. 1,200 ft.

Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. for water 1,350 ft.

Jack Clarke's No. 1 Moore, 330 ft. S and W NE cor. NW Sec. 1-13-15.
S.D. 1,675 ft.

Dempsey & Manziel's No. 1 Thigpen, 275 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
S.D. for wtr. 1,610 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
Set 10-in. 65 ft.; drlg. 700 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Drlg. 1,950 ft.

George Le Grande's No. 1 Vance, 150 ft. N and W SE cor. SW Sec. 24-13-16.
Rigged up and S.D.

Texas Co.'s No. 13-A Wemple, Sec. 1-12-12.
Sidetracked D.S. testing 3,424 ft.

W. K. Williams' No. 1 Wemple, 600 ft. N, 330 ft. W, SE cor. Sec. 15-12-11.
Rigging up.

J. S. Tuffree's No. 1 McGill, 450 ft. N. 150 ft. W, SE cor. SW SE Sec. 1-10-13.
S.W. and abd. 2,125 ft.

EAST CARROLL PARISH

United Gas Public Service Co.'s No. 1 Giddens, 659 ft. W, 1,349 ft. S, NE cor. Sec. 12-19-10e.
Set 6⅝-in. 2,338 ft.

MOREHOUSE PARISH

Zeiger & Bacon's No. 1 Crossett, 400 ft N, 300 ft. W, SE cor. Sec. 41-22-4e.
T.A. 3,111 ft.

(Continued on Page 91)

Big Wells in Three Oklahoma Pools; Increased Crude Output; Commission Hears Oil Men

By JAMES McINTYRE

A 7,500-bbl. well in the Polo Pool in Noble County; a 10,000-bbl. well in the Lucien Pool in the same county, and a 7,000-bbl. completion in the South Burbank Pool in Osage County were chief features of field results in Oklahoma in the past week.

Production in the State was increased from 416,910 bbls. per day, as of the week ending September 8, to 502,420 bbls. per day as of the week ending September 15. Oklahoma City's production was increased from 112,790 bbls. per day to 174,005 bbls. per day.

The Caddo Deep Test

The Denver Producing & Refining Co.'s deep test in Caddo County, No. 1 A-Dah-Noe, C NW SW SW Section 34-10-10w, has been standing at a total depth of 11,230 feet with a fishing job. Further efforts will be made to clear the hole of the accumulation of drill pipe and rotary bit which is stuck on bottom, but if these fail the well will be completed at a depth of about 10,000 feet, making it the deepest producing well in the world. While coming out of the hole recently with a big "fish" the load was dropped damaging the 6⅝-inch casing necessitating cutting off 4,600 feet. In the attempt to mill through the top of the casing the milling tool was lost.

Estimated Production

Estimated production by pool in Oklahoma for the week ending September 15 and for the preceding week follows:

	Barrels	
	Sept. 15	Sept. 8
Allen	7,680	7,360
Blackwell district	4,775	4,775
Bristow-Slick	10,500	10,500
Cushing-Shamrock	14,000	14,500
Chandler District	7,000	6,500
Davenport	750	750
Healdton	9,350	9,350
Hewitt	5,000	5,000
Burbank	9,100	9,100
South Burbank	8,300	9,100
Balance of Osage	26,500	26,500
Lucien	9,100	6,895
Crescent	4,080	2,680
Marshall-Lovell	1,200	1,200
Bowlegs	10,610	7,605
Carr City	6,320	4,550
Earlsboro	9,815	7,590
East Earlsboro	9,865	7,805
South Earlsboro	1,005	670
Little River	14,355	10,230
East Little River	810	610
Seminole	10,475	7,810
East Seminole	1,425	1,200
Searight	2,850	2,505
Maud	1,030	1,135
Mission	3,790	2,540
St. Louis-Pearson	21,315	19,330
Keokuk	1,825	2,230
Cromwell	4,750	4,750
Papoose	1,300	1,300
Oklahoma City	174,005	112,790
Asher-West Asher	1,630	1,690
Tatums	6,750	5,600
Sholem-Alechem	4,350	4,350
Duncan	4,500	4,525
Tonkawa-Garber-Thomas	6,500	6,500
Fish	3,810	3,320
Konawa	1,975	1,880
Gray	1,800	1,840
Graham	3,750	3,750
Holdenville	3,150	2,985
Wewoka	4,450	4,475
Yale-Jennings	5,100	5,250
Other pools	61,755	61,385
Total	502,420	416,910

Big Well in Polo Pool

The Polo Pool in Noble County, Oklahoma's newest oil field, came strongly into prominence in the past week when the Sinclair Oil & Gas Co.'s No. 1 Smith, SW SE NE Section 28-22-2w, was given a two and one-half hour test and showed enough production to warrant the belief that it is good for 7,500 bbls. per day. This well has Wilcox sand at 4,822-64 feet and at 4,867-72 feet, still in sand. In the test above referred to the well made 372 bbls. the first hour, 324 bbls. the second hour and 145 bbls. the next 30 minutes. The company has made a location for No. 2 Smith in SE SE NE Section 28.

Edmond Producers Heard

Operators in the Edmond, Oklahoma County, Pool appeared before the Corporation Commission on Thursday and petitioned that that pool be reclassified from a wildcat pool to a Class B or C pool and that the allowable production in the pool be raised from 100 bbls. per day per well to 1,000 bbls. per day for the pool. There are now three wells in the pool, two of which are owned by the Marathon Oil Co. and one by the Stanolind Oil & Gas Co. and Amerada Petroleum Corp. These operators through their attorneys made the plea that a flat allowable was discriminatory and that production should be prorated according to the capacity of each well to produce.

The meeting followed one at which Assistant State Umpire C. C. Brown recommended that order CD-2 be changed to fix wildcat well production at a maximum of 100 bbls. per day per well. At this earlier meeting it was proposed that all discovery wells be allowed 15,000 bbls. of production in conditioning and completing the well provided the 15,000 bbls. could be made up before the second well was completed.

J. J. Frommer, district superintendent for the Marathon Oil Co., told of development of the Edmond Field, which was discovered by his company's No. 1 Messer on September 15, 1930, and completed for 456 bbls. daily. The well was shut down until last April when it went back on production. During the shutdown period the company paid $13,044 in advance royalty.

The same company's No. 1 Dahl, offset to the discovery, is estimated good for 12,000 bbls. daily. A southwest offset, the Stanolind-Amerada's No. 1 Suneram, is estimated at 10,000 bbls. daily.

Frank Clark, chief geologist for the Marathon Oil Co., said the shutting in of the No. 1 Messer prevented a drilling campaign in the area at a time when excess production would have flooded the market. He opposed flat allowables on the ground that it would cause undue waste of reservoir energy.

Robert Galbreath, Jr., asserted that there is today 150,000 bbls. of "distress" crude in the Oklahoma City Field, and that to permit the wildcat areas to produce more oil probably would result in loss of connections in the older areas.

The commission took both cases under advisement.

Wilcox Fine Canceled

The State Supreme Court last week directed the Corporation Commission to dismiss an order fining the H. F. Wilcox Oil & Gas Co. $8,500 on several counts of overproduction under the commission's orders of 1932. The Supreme Court held that all orders from January 1, 1931, to April 9, 1933, were void. Syllabus of the order last week held that no one may be punished for contempt for disobedience of the void order.

Osage County

In Osage County, Carter Oil Co.'s No. 3 W. Mosier, SE cor. SW Section 34-26-6, in the north end of the South Burbank Field, found Burbank sand at 2,808-54 feet, total depth 2,866 feet. The well flowed 40 bbls. a day naturally, but when given a 60-quart shot at 2,826-56 feet it flowed 590 bbls. in 16 hours with 1,000,000 feet of gas. It was shut in for tankage.

Midco Oil Co.'s No. 5 Adlum, NE NW NW Section 10-25-6, was given a potential test and made 7,220 bbls. in 48 hours from Burbank sand at 2,675-80 feet, total depth. It was completed.

A. H. Kasishke's No. 7 Carroll, SE cor. SW Section 15-25-6, swabbed 115 bbls. in 24 hours following a 60-quart shot at 2,732-62 feet. The crew was cleaning out.

Phillips Petroleum Co. completed its No. 7, NW cor. Section 15-25-6. This well had Burbank sand at 2,827-74 feet. It was given several small shots and when put on the pump made 65 bbls. of oil and 12 bbls. of water in 24 hours.

Carl T. Matthews and others' No. 1, SW cor. SE Section 34-23-7, was abandoned as dry at 2,591 feet, 3 feet in the Mississippi lime.

New work in Osage County included Phillips Petroleum Co.'s No. 16, C SE Section 16-25-11, old total depth 1,785 feet, will drill deeper; Bay Oil Corp.'s No. 3, SE NE NW Section 13-23-7, location; Comail Oil Co.'s No. 3, SW NE SW Section 32-22-8, location; Indian Territory Illuminating Oil Co.'s No. 1, NE SE SW Section 5-22-10, cellar, and John L. Essley's No. 7, SW SE NE SE Section 5-22-11, location.

Noble County

In the Polo Pool in Noble County, Stanolind Oil & Gas Co. has pits dug for No. 1 DeBord, C NW NW SW Section 27-22-2w. Mid-Continent Petroleum Corp.'s No. 1 Smith, SE SW NW Section 28-22-2w, set 15-inch pipe at 127 feet. Stanolind Oil & Gas Co. and others' No. 2 Voss (on the discovery lease), NW NE SE Section 28-22-2w, was drilling at 4,656 feet and should soon be in the pay, and made location for No. 3 Voss, NE NW SE Section 28. Sinclair Prairie Oil Co. has made location for No. 2 Smith, C SE SE NE Section 28. Its No. 1 Smith, already mentioned, is a 7,500-bbl. well. There are a number of short term leases in this area and it is expected several more wells will soon be started.

In the Lucien Pool, Noble County, Lucien Consolidated's No. 2 Moelling, C NW SE Section 17-20-2w, was completed. It flowed 10,490 bbls. and 8,000,000 feet of gas from first Wilcox sand at 5,120-77 feet. Same unit operator's No. 3 Wolff, C SW NW Section 17-20-

Wildcat Operations in Oklahoma

Week Ending September 15

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; lost tools and S.D.

BECKHAM COUNTY

Price and Watchorn C. & G. Co.'s No. 1 Hoard, NE SW Sec. 17-8-26w.
Drlg. 2,210 ft.

CADDO COUNTY

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; drill pipe stuck; S.D.

CLEVELAND COUNTY

Anderson & Kerr et al's No. 1 Wilson, NW SE Sec. 27-10-1e.
Drlg. 4,450 ft.

Mid-Continent Pet. Corp. et al's No. 1 Collett, C E½ NE SW Sec. 35-10-1w.
Drlg. 3,335 ft.

Phillips Pet. Co. et al's No. 1 Baker, C SE NW Sec 11-9-2w.
T.D. 7,550 ft.; dry and abd.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
Cromwell sand 5,430 ft.; show of oil 5,470-90 ft.; drlg. 5,755 ft.

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8e.
Drlg. 292 ft.

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8e.
S.D. 300 ft.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GARVIN COUNTY

William H. Atkinson et al's No. 1 Pharoah, NW cor. Sec. 15-3-2w.
Rig.

GRANT COUNTY

Heimerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
Set surface csg.; S.D. 625 ft.

Sultan Oil Corp.'s No. 1 Patton, SW SE Sec. 19-29-3w.
Drlg. 2,740 ft.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
Drlg. 4,870 ft.

HUGHES COUNTY

J. B. Hill's No. 1-A Perkins, C W½ SW SW Sec. 7-5-9.
T.D. 1,075 ft.; S.D.

Turner et al's No. 1 Williams, SW cor. Sec. 35-7-10.
Rig.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
Drlg. 6,648 ft.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 2-4-26.
S.D. 1,603 ft. for water.

Leflore Gas & Elec. Co.'s No. 1 James, C W line SE SW SW Sec. 11-6-21e.
Sand 1,495-1,615 ft.; 250,000 ft. gas; T.D. 1,877 ft.; P.B. to 1,692 ft.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,425 ft.; S.D.

LINCOLN COUNTY

Mid-Continental Oil Co.'s No. 1 Bolby, C SE SW Sec. 27-12-2.
S.D. 4,310 ft.

Texas Co.'s No. 1 Gessmann, SE NE Sec. 33-14-4.
T.D. 5,002 ft.; P.B. and shot sand at 3,035-40 ft.; flowed 225 bbls. oil; will run tubing.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Wilcox 5,265-85 ft.; P.B. to 5,181 ft.; will shoot Misener sand.

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
T.D. 4,989 ft.; tested Layton sand at 4,863-87 ft.; 8,000,000 ft. gas and show of oil, 1,680 lbs. casinghead pressure; shut in.

OKLAHOMA COUNTY

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole; S.D.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
S.D. 1,712 ft. for water.

Empire O. & R. Co.'s No. 1, SE NE Sec. 3-25-8.
Wilcox sand failure at 3,824 ft.; T.D.; P.B.; shot Layton sand 2,570-2,640 ft.; pumped 25 bbls. of oil, 10 bbls. water.

Norbla Oil Co. et al's No. 1, SE NW Sec. 19-25-7.
T.D. 1,148 ft.; U.R. 10-in. csg.

PITTSBURG COUNTY

Arkhoma's No. 1 Cummings, NW NE SE Sec. 6-4-13.
T.D. 1,600 ft.; S.D.

Armoka Oil Co.'s No. 1 Cummings, NW NE SE Sec. 6-4-12.
Dry and abd. 1,600 ft.

Exchange Drlg. Co. et al's No. 1 Chunn, SE NW Sec. 29-4-14.
T.D. 350 ft.; waiting for csg.

P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-13.
Rigging up.

W. E. Hailey's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-8-14.
Lost tools; T.D. 3,210 ft.; abd.

PONTOTOC COUNTY

Charles E. Carter et al's No. 1 Wood, NW SW SE Sec. 5-4-3.
Spudded.

S. D. Denton et al's No. 1 Gray, NE SW Sec. 9-4-3.
Cellar and pits.

Benedum & Trees' No. 1 James, SE NW SW Sec. 10-5-3.
Drlg. 2,253 ft.

(Continued on Page 70)

2w, made an initial production of 1,320 bbls. and was completed. It had first wilcox sand at 5,084-5,149 feet and second Wilcox sand at 5,230-53 feet. Same unit operators' No. 4 Weber, C SW NW Section 20-20-2w, made an initial production of 4,486 bbls. and 2,500,000 feet of gas and was completed. First Wilcox sand lay at 4,995-5,044 feet and second at 5,109 feet, total depth 5,205 feet.

Shell Petroleum Corp.'s No. 3 Kolb, C SE SW Section 28-20-2w, which had Wilcox sands at 4,993-5,052 feet and 5,109-36 feet, and which flowed and swabbed about 408 bbls., was shot with 80 quarts at 5,113-33 feet and made 420 bbls. flowing and swabbing. It was then given a 30-quart shot at 5,031-40 feet and the crew was cleaning out.

Creek County

Magnolia Petroleum Co.'s No. 26 Coker, NW SW SW NW Section 17-18-7, Creek County, an old well deepened to lower Bartlesville sand at 2,521-2,633 feet, was completed as an 80-bbl. initial producer.

Creeokla Oil Co.'s No. 2 Watashe, NW SW NE Section 4-17-10, is a 20-bbl. completion after a shot in Perryman sand at 1,958-76 feet.

New work in the county included A. W. Swift's No. 3-A Coonrod, SW cor. NW Section 4-19-9, total depth 560 feet, fishing; Johnson Oil & Refining Co.'s No. 1 Scott, NW NE NW Section 32-19-9, set 10-inch pipe at 860 feet and drilling at 1,960 feet; Samples & Mann's No. 1 Rentie, NE SW SE Section 32-19-9, old well drilling deeper, drilling at 2,480 feet; L. B. Jackson's No. 10 Willis, CNL SW NW Section 26-18-8, drilling at 865 feet; Horton & Greer's No. 1 Morrison, SW SE NE Section 35-18-8, shut down at 660 feet; Tide Water Oil Co. and others' No. 3 Jackson, SE NE SE Section 3-17-7, drilling deeper, Bartlesville sand at 2,400-85 feet, rigging up standard tools; Bay State Oil Co.'s No. 3 Tiger, NE SW SW Section 3-17-8, rig on the ground; Magnolia Petroleum Co.'s No. 8 Street, NW NE NE Section 3-17-8, spudding; C. W. Titus' No. 5 Casey-A, NE SE SW Section 3-17-8, total depth 590 feet, drilling by tools; same operator's No. 6 Casey-A, NW SE SW Section 3-17-8, machine; Bay State Oil Co.'s No. 1 Buckner, NE NW NE Section 9-17-8, rig on ground; Kirchner and others' No. 4 Johnson, NE SE SE Section 14-17-8, old well drilled deeper, 10-bbl. showing in Bartlesville sand at 2,791-2,804 feet, cleaning out; Murta, Sherry and others' No. 4 Cruel, SE SW NE Section 36-17-11, drilling at 670 feet; Atlantic Oil Producing Co., Sinclair Prairie Oil Co. and Texas Co.'s No. 2 Harjo, NW NE SE Section 27-14-10, building rig.

Okmulgee County

Harmon Brothers' No. 1-C Bell, NW cor. Section 5-15-12, Okmulgee County, is a 1,000,000-foot gas completion, producing from sand at 1,018-48 feet.

Aggis Drilling Co. was spudding No. 1-A McKinney, NW cor. SW Section 16-15-14.

Logan County

Gypsy Oil Co. and Sinclair Prairie Oil Co.'s No. 1 Manning, C NW NW Section 3-17-4w, a wildcat in Logan County, found Layton sand at 4,863 feet and drilled to 4,989 feet. The sand tested and developed a gas production of 8,000,000 feet per day with a showing of oil. It had a casinghead pressure of 1,680 feet. It was shut in.

In the Crescent Pool, Eason Oil Co. completed its No. 3 Katscher No. 2, NW SW SW Section 34-17-4w. It tested 2,893 bbls. of oil in 24 hours together with 3,000,000 feet of gas, from Wilcox sand at 6,200-35 feet. Same company was digging cellar for No. 1 Katscher No. 3, SW SE NW Section 34-17-4w. Its No. 2 Katscher No. 1, C NW NE SW Section 34, had Viola lime at 6,160-82 feet and set 8⅝-inch casing at 6,173 feet. Carter Oil Co. and Gypsy Oil Co.'s No. 1 Middleton, C SE SE Section 21-17-4w, was at a total depth of 6,366 feet, having cored from 6,358 feet to the bottom. There was no showing of oil. The drill pipe was lost in the hole and the crew was cleaning out and washing down.

Gypsy Oil Co.'s No. 1 Hanewinckel, C NW NW Section 27-17-4w, found Wilcox sand at 6,369-74 feet. When washed with oil it would not flow. Tubing was pulled and rerun and oil was circulated but still it did not flow.

In the Langston Pool in Logan County, the Texas Co. and Stanolind Oil & Gas Co.'s No. 1 Smith, C NE NW Section 14-17-1w, flowed 345 bbls. in a 24-hour test, producing from Wilcox sand at 5,107 feet, total depth 5,131 feet. It was not completed.

Mid-Continent Oil & Gas Co.'s No. 1 Moss, SW SE Section 11-17-1w, had flowed 593 bbls. of oil naturally from Wilcox sand at 5,104-24 feet and after a shot began to show a lot of water. The crew tried to exhaust the water by swabbing, but without success up to the last report from the well.

Lincoln County

In the West Chandler area in Lincoln County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 M. Cragg, NE SE NW Section 12-14-3, had Wilcox sand at 4,964-77 feet. It flowed and swabbed 123 bbls. of oil and 12 bbls. of water in 18 hours.

The Texas Co.'s No. 1 Gessman, SE NE Section 33-14-4, Chandler Pool, was shot with 5 quarts in sand at 3,035-40 feet and flowed 225 bbls. of oil in 24 hours. A week later it was again tested and flowed 109 bbls. of oil in 24 hours. Preparations were being made to run tubing. This test was a hole full of water from Wilcox sand at 4,990-5,002 feet and was plugged back to Cleveland sand.

The only new work in the Chandler area was Derrickson & Reserve Petroleum Co.'s No. 1 Law, SE SW NE Section 25-14-3, a location for a wildcat.

Oklahoma County

Frank Russell, Inc., has abandoned two locations in the NW SW NE SW and the SW NW SW Section 23-12-3w, in the Oklahoma City Field.

Harrell-Davis' No. 2 Riverside Park, 120 feet from south and 675 feet from east line of SW Section 34-12-3w, produced 1,415 bbls. in 17 hours on the gas lift from Wilcox sand at 6,340-70 feet.

Ray Stephens' No. 1 Rucker, 438 feet south and 265 feet east of NW cor. Section 2-11-3w, was completed. It tested 1,576 bbls. in 24 hours from Wilcox pay at 6,305-65 feet, which had been shot.

Indian Territory Illuminating Oil Co. completed No. 9 Peterson, SW cor. Section 25-11-3w. The well was shot with 40 quarts at 6,462-72 feet and later drilled to 6,604 feet. It produced 512 bbls. in 24 hours on the gas lift.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 7 Berg, NW SE SW Section 26-11-3w, was completed. It produced 685 bbls. in 24 hours on the gas lift from pay at 6,596-6,628 feet which was shot with 44 quarts.

Recent deals in leases in Oklahoma County include the gathering of a block on the northwest edge of the Britton townsite by Slick-Urschel, Inc., Sinclair Prairie Oil Co. and Frank Buttram for a unit plan of development. An attempt is being made to make a unit operation out of a block of leases between the Springrose well near Newalla and Nicoma Park. A new leasing play is reported near Witcher in Township 13n-2w.

Greater Seminole

Mid-Continent Petroleum Corp. is rigged up to make a Hunton lime test of No. 3 Dindy-B, SW NE Section 31-11-11, Okfuskee County, present total depth 3,027 feet.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. completed No. 1 Goodman, a wildcat, SW NE NE Section 5-10-4, Pottawatomie County. It tested 304 bbls. of oil and 60 bbls. of water, 1½ per cent sediment, in nine hours, producing from Earlsboro sand topped at 4,405 feet. Total depth of the hole is 4,453 feet.

Helmerich & Payne's No. 1 Mingo, SE NE NW Section 25-10-15, Okfuskee

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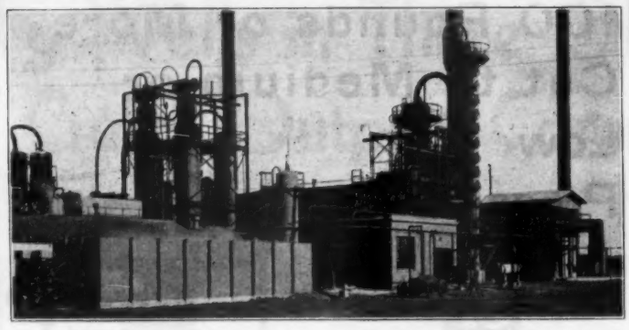

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MISSOURI PACIFIC LINES

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County, was dry and abandoned at 4,225 feet.

Anderson & Kerr completed No. 1 Foreman, C SW SE Section 18-9-5, Earlsboro district. It flowed 525 bbls. of oil in 24 hours from Hunton lime at 4,097-4,140 feet, which was acidized.

In the South St. Louis area, Pottawatomie County, Mid-Continent Crude Oil Purchasing Co.'s No. 1-A Bewley had Hunton lime at 3,745-78 feet. It was acidized and the well was completed after swabbing 175 bbls. in 24 hours.

Phillips Petroleum Co.'s No. 3 Duff, SW NW SW Section 10-7-4, was acidized in Hunton lime and again at 3,975-98 feet. It swabbed 191 bbls. net oil in 24 hours and was completed.

Phillips Petroleum Co.'s No. 2 Curley, SW SE NW Section 22-7-4, an old well deepened to dolomite at 4,173-4,215 feet and acidized, made only a 20-bbl. initial producer. It was completed.

Maebris Oil Co.'s No. 2 Bohannon, SE cor. SW Section 27-7-4, is a 45-bbl. completion from Cromwell sand at 3,460-90 feet. It had been drilled to 4,312 feet in dolomite, but the hole filled with water.

Magnolia Petroleum Co.'s No. 6 Brandenburg, NW cor. Section 18-7-5, made 305 bbls. in 24 hours after an acid treatment in dolomite at 3,944-53 feet. It was completed.

Baskin & Leeper's No. 1 Coppidge, SE cor. Section 16-7-8, Hughes County, was dry and abandoned at 3,142 feet.

Magnolia Petroleum Co.'s No. 1 Reed, NE SE SE Section 30-7-8, Seminole County, was completed in Cromwell sand at 3,076-83 feet. It made an initial production of 690 bbls.

New work in the Greater Seminole district follows: Steckoll & Durkee's No. 3 Johnson, CWL NE SE Section 2-10-11, a machine; British American Oil Co.'s No. 1 Straight, NW cor. NE Section 20-9-5, a rig; Rogers Oil & Gas Co.'s No. 1 Wellington, SW NE SE Section 18-8-7, a rig; Bud Smith and others' No. 1-A Wood, SW NW SW Section 31-7-5, rigging up; Mid-Continent Petroleum Corp.'s No. 1 Harjoge, NW SE SE Section 31-7-8, a rig; Winona Oil Co. and Jarvis & Holm's No. 2 Myers, NE SW NE Section 31-7-8, a rig; Verser & Clay's No. 1 Thomas, NE SE NW Section 1-6-6, rigged up.

Pontotoc County

In Pontotoc County, Mid-Okla Oil Co.'s No. 1 Mercer, SE SW Section 24-5-4, is a 15-bbl. pumper from Viola lime at 2,620-2,761 feet, completed.

Manahan Oil Co. completed No. 1 Grady Gray, SW NE Section 25-5-4, a 50-bbl. pumper at a total depth of 2,682 feet.

(Continued on Page 94)

Wildcat Operations in Oklahoma

(Continued from Page 74)

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,920 ft.

Boyle et al's No. 1 Newbern, SW NE Sec. 31-5-4.
Wilcox sand 2,226 ft.; cored 2,269-79 ft.; cored 2,279-85 ft.; green shale cored 2,295-2,305 ft.; no core recovered; show water.

Emanuel, Rudman & Hatcher's No. 1 Mayer, SW SE NW Sec. 7-3-8.
T.D. 1,525 ft.; cleaning out.

Jarrett Pet. Co.'s No. 1 Johnson, SE NW Sec. 28-4-4.
Drlg. 1,585 ft.; Calvin sand 1,475-1,555 ft.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 680 ft.; S.D.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 26-1n-6e.
S.D. for pipe at 650 ft.

Riddle et al's No. 1 Barnes, SE NW SE Sec. 21-5-4.
Drlg. by tools at 2,850 ft.

J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
Set 12½-in. pipe 320 ft.

Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Machine.

POTTAWATOMIE COUNTY

W. D. Grisso et al's No. 1-A Kenyon, C NE SE Sec. 3-8-4.
Drlg. 605 ft.

Phillips and Gypsy Oil Co. et al's No. 1 Flynn, NE NW Sec. 17-6-3.
Simpson dense 4,393 ft.; set 5-in. 4,582 ft.; drlg. 4,592 ft.

Stanolind-Amerada's No. 1 Goodman, SW NE NE Sec. 5-10-4.
Earlsboro sand 4,405-53 ft., T.D.; flowed 304 bbls. oil, 60 bbls. water, 1½ per cent b.s., in 9½ hrs.; comp.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
Rigging up.

SEMINOLE COUNTY

Harman Oil Co.'s No. 1 Bowlegs, SE NE SW Sec. 1-7-7.
T.D. 1,655 ft.; pulling pipe.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-6 (O.W.P.B.).
Old T.D. 2,935 ft.; ripped csg. 2,100-12 ft.; flowed 101 bbls. in 24 hrs.

Moran et al's No. 1 Brinlee, SW NE Sec. 27-6-8.
Sand 2,330-50 ft.; show of oil; T.D. 2,375 ft.; will run csg.

Tate & Star uck's No. 1 Heard, SE NW Sec. 9-6-7.
T.D. 1,020 ft.; cleaning out.

WASHITA COUNTY

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-8-17w.
Rigged up and S.D.

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig down.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
S.D. 3,709 ft.

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.

L. A. Fitts' No. 1 Blankenship, NE cor. NW Sec. 19-3s-10e.
T.D. 651 ft.; S.D.

Malernee et al's No. 1 Greenville, N. B., NW SW Sec. 36-2s-13e.
Sand, show oil 2,128-35 ft.; T.D. 2,150 ft.; S.D.

T. C. Ramler et al's No. 1 Roberts, SW SE SW Sec. 6-2s-12e.
S.D. 951 ft. for 6-in. csg.

CARTER COUNTY

Carter Oil Co.'s No. 1 Bonner, SW SE SE Sec. 19-3s-2w.
Drlg. 2,923 ft.

Daphine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
Drlg. 1,532 ft. in lime.

Hudson & Poland's No. 1 Sullivan, NE SE Sec. 5-5s-1w.
T.D. 4,511 ft.; P.B.; set 6-in. csg. 3,920 ft.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e.
Drlg. 780 ft.

COMANCHE COUNTY

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
T.D. 1,210 ft.; fishing.

Helden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-12w.
Fishing 825 ft.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w.
S.D. 351 ft.

JACKSON COUNTY

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; show of oil and water; T.D. 1,723 ft.; S.D.

Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 10-1n-20w.
T.D. 1,690 ft.; lime; show oil; reaming.

Ben Russell et al's No. 1 Unknown, NW SE Sec. 30-1-22w.
Drlg. 3,100 ft.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 10-4s-4w.
Gas show 1,510-12 ft. and 1,804-18 ft.; T.D. 1,869 ft.; recementing surface pipe.

Roy Star's No. 1 Jack, SW SE SW Sec. 3-4s-4w.
S.D. 301 ft.

JOHNSTON COUNTY

Okla. Oil Corp.'s No. 1 Tubbi, SW NE SE Sec. 11-2s-8.
Sulphur water at 3,765-76 ft.; S.D.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,937 ft.; S.D. for water.

MURRAY COUNTY

Ed Galt et al's No. 1 Aetna Life Ins. Co., SE NW NW NW Sec. 14-2s-3e.
Arbuckle lime at 990 ft.; T.D. 1,010 ft.; S.D.

Gilcrease Oil Co.'s No. 1 Brown, SW cor. Sec. 26-1n-2e.
Wilcox sand 1,724-38 f...; H.F.W.; T.D. 1,742 ft.; P.B. to 1,540 ft.; set 3-in. pipe 1,250 ft.; bailed dry; S.D.

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
S.D. 2,600 ft.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NW cor. SE Sec. 17-1n-8w.
Building rig for 1,800-ft. test.

Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 22-1s-4w.
Drlg. 3,370 ft. on top of oil sand.

Finley et al's No. 1 Woolsey, NW SE Sec. 10-3s-6w.
Sand 325-27 ft.; show gas; S.D. 440 ft.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; S.D. 2,220 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w.
Rig.

Week of Routine Completions, Dry Wildcats and Little New Work in Kansas Oil Fields

By JAMES McINTYRE

Field developments in Kansas in the past week were characterized by routine completions and by a very small number of new first reports of projected drilling. Wildcat tests in Barber and Sumner Counties were abandoned as failures owing to overdoses of water.

Production in the State increased to 126,585 bbls. per day as compared with 120,900 bbls. per day in the previous week.

Estimated Production

Estimated daily average production of Kansas in the week ending September 15 and the preceding week follows:

	Barrels	
	Sept. 15	Sept. 8
Hollow	8,375	8,085
Ritz-Canton	12,075	11,985
Voshell	5,855	5,725
Johnson	1,720	1,765
Sedgwick County	7,475	7,290
Nikkell	5,660	6,070
Ellsworth County	2,130	2,150
Barton County	1,299	1,000
Rice County	12,159	10,014
Reno County	6,267	5,404
Ellis County	655	440
Kingman County	1,450	1,320
Stafford County	1,517	960
Russell County	7,980	7,185
Greenwood County	12,000	12,200
Butler County	20,000	20,100
Other pools	19,918	19,157
Total	126,585	120,900

Rice County

Phillips Petroleum Co. was building rig for No. 3 Mezger, NW SW NE Section 21-20-10w, Rice County.

Gypsy Oil Co.'s No. 6 Christopher, C NE Section 6-20-9w, found Siliceous lime at 3,252-60 feet and swabbed 65 bbls. per hour. It was being prepared for a potential test.

Phillips Petroleum Co. made location for No. 1 Link, SW NW SW Section 21-19-9w.

Keith and others' No. 1 Volkland, SE NE SE Section 20-19-9w, producing from Siliceous lime at 3,206-25 feet, pumped 362 bbls. in 17½ hours on a potential test. It will be cleaned out and another test made.

E. F. Jones and others' No. 3 Rose, NW SE SE Section 31-19-9w, was completed in Siliceous lime at 3,212-15 feet. It pumped 1,135 bbls. in 24 hours.

H. V. Elwell and others' No. 2 Brunkau, NW SE NW Section 32-19-9w, a Siliceous lime well at 3,239-50 feet, which had been acidized, made a potential production of 717 bbls. in 24 hours and was completed.

Robertson and others' No. 1 Johnson, NW cor. SW Section 22-19-8w, was a hole full of water from Siliceous lime at 3,543-49 feet and was abandoned.

Continental Oil Co.'s No. 1 Ainsworth, SW cor. NE Section 25-18-8w, pumped 1,598 bbls. in 24 hours from Siliceous lime at 3,132-72 feet and was completed.

Ellsworth County

Sinclair Prairie Oil Co.'s No. 4 Straiman, SE NE SW Section 1-17-10w, Ellsworth County, had Siliceous lime at 3,244-58 feet and swabbed 270 bbls. in 12 hours and was then acidized.

Russell County

Sinclair Prairie Oil Co. and Slick-Urschel Inc.'s No. 1 Sellens, SW cor. 25-15-13w, Russell County, was acidized at 2,990-3,005 feet and swabbed 143 bbls. in 24 hours. Liner was set on top of Oswald sand at 3,048 feet and the well was drilling at 3,050 feet.

Signal Oil & Gas Co.'s No. 2 Taylor, C E half SE Section 25-15-13w, was acidized at 3,368-74 feet and swabbed 1 bbl. per hour.

Central Petroleum Co. was rigging up standard tools to start No. 1 Dortland C, NE cor. NW Section 4-14-15w.

Rooks County

Ashby and others were taking a potential test at No. 1 Doughty, C SW SW Section 15-8-19w, Rooks County. Pay at 3,215-25 feet had been acidized.

Stafford County

Stanolind Oil & Gas Co.'s No. 5 Allen, NE NW NW Section 31-22-11w, Stafford County, was acidizezd in Siliceous lime at 3,532-47 feet and pumped 131 bbls. in 24 hours. It will be drilled deeper.

Reno County

In Reno County, Engler and others' No. 1 Balzer, SE cor. NW Section 36-22-4w, found chat at 3,251 feet and drilled to 3,323 feet. The hole filled 700 feet with oil in seven hours.

In Harvey County, Shell Petroleum Corp.'s No. 5 Voth, C N half N half NW Section 4-22-3w, made 1,216 bbls. in 24 hours from Hunton lime at 3,484-3,503 feet, and was completed.

Sinclair Prairie Oil Co.'s No. 6 Martens, NW SW SE Section 19-22-3w, will be deepened from 3,376 feet and the crew was rigging up.

Derby Oil Co. is building rig to offset Hollow and others' discovery well for No. 1 Billau, SW SE SW Section 5-22-1w, to offset Hollow and others' discovery well, No. 1 Summerfelt, NW NE NW Section 8-22-1w. The latter will be acidized in Hunton lime at 3,310-55 feet. Its best record so far was to pump 247 bbls. in 13 hours.

Barton County

Atlantic Oil Producing Co.'s No. 2 Gates A, C NE SE Section 27-21-13w, Barton County, swabbed 25 bbls. per hour from Siliceous lime at 3,644-67 feet, total depth.

Stanolind Oil & Gas Co. made a location for No. 2 Jutting, C NW NW Section 15-20-11w. Same company's No. 1 Jutting, C SE NE Section 16-20-11w, swabbed 6 bbls. per hour from Siliceous lime at 3,300-3,309 feet.

Sumner County

Morgan & Flynn's wildcat test in Sumner County, No. 1 Mercer, NW NE NW Section 36-32-1w, found Wilcox sand at 4,130-39 feet, but got only a hole full of water and was abandoned.

Barber County

Lario Oil & Gas Co. and others' No. 1 Whelan, C NW Section 32-31-11w, in Barber County, pumped 231 bbls. of oil and about 180 bbls. of water in a recent 24-hour test. This well has been drilled to 4,435 feet and was plugged back to 4,380 feet. Mississippi lime was topped at 4,355 feet. The well is not a completion.

Cowley County

Lewis Production Co. and others' No. 3 Sitton, SE NE Section 30-31-6, Cowley County, was shot in Bartlesville sand at 2,892-2,956 feet and made an 80-bbl. initial production. It was completed.

Kingman County

Skelly Oil Co.'s No. 1 A. Conley, SW NW SW Section 20-27-10w, in Kingman County, flowed 268 bbls. of oil and 5,000,000 feet of gas in 24 hours from Lansing lime at 3,430-3,511 feet. It was then acidized.

Hartman Oil Co. and others' No. 1 Stone, C NW NW Section 15-24-4w, Kingman County found a pay at 3,337-44 feet. It pumped 3 bbls. per hour and then was given an acid treatment.

Sedgwick County

E. B. Shawver has rig up for No. 2 Brookings, NW SW SW Section 16-28-1e, in Sedgwick County, and had cellar dug for No. 2 Russell SW SE SE Section 17-28-1e.

Lawrence Spencer and others' No. 1 Jacobs, SE cor. Section 22-25-1w, had 200 feet of oil in the hole at a total depth of 2,795 feet. The first showing was at 2,687 feet.

Stearns and others were testing No. 1 Stearns, NE cor. SE Section 17-25-1e, which had a hole full of oil from Hunton lime at 3,332-37 feet, total depth.

Butler County

Sovereign Oil Co.'s No. 1 McGinnis, SW cor. SE Section 9-27-6, Butler County, an old well deepened, found Viola lime at 3,141-52 feet. It was completed as a 12-bbl. initial producer, but it also produced 40 bbls. of water.

The Texas Co.'s No. 2 Wagner, SW SE SW Section 29-26-6, pumped 10 bbls. in 24 hours from Mississippi lime at 2,761-90 feet, after an acid treatment. Sheldon and others' No. 1 Houston, SE NE SE Section 1-25-3, was a hole full of water at 2,713 feet and was abandoned.

Sheldon and others had better success with their No. 1 Moore, SW SE Section 1-25-3. Chat was found at 2,668-72 feet. It was acidized and the well later made a four-day average of 307 bbls. per day and was completed.

Saco Oil Co.'s No. 1-A Wilson, NE

Wildcat Operations in Kansas

Week Ending September 15

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w.
Chat 4,355-4,435 ft.; P.B. to 4,380 ft.; pumped 231 bbls. oil and 180 bbls. water in 24 hrs.; testing.

BARTON COUNTY

Gypsy Oil Co. and Atlantic Prod. Co. and Shell Pet. Corp.'s No. 1 Batchman, C SW NE Sec. 18-20-12w.
Drlg. 2,929 ft.

Murphin and Downing's No. 1 Lanterman, NW SE Sec. 15-19-11w.
Rigged up.

National Ref. Co.'s No. 1 Ingersoll, C NW NE Sec. 2-19-13w.
T.D. 2,180 ft.; S.D.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-13w.
Rig.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w.
S.D. 300 ft.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE SE Sec. 19-29-4.
Spudded.

Bill Rex et al's No. 1 DeMoss, NE NW Sec. 8-28-7.
Drlg. 1,260 ft.

F. H. Unruh et al's No. 1-A Joseph, SE SW NW Sec. 18-25-4e.
Bldg. rig.

CLAY COUNTY

Seidel Bros.' No. 1 Youkers, C S½ SE NW Sec. 21-9-4.
T.D. 1,225 ft.; S.D.

COWLEY COUNTY

National Refining Co.'s No. 1 Robinson, NE SE NE Section 11-34-4.
Drlg. 2,570 ft.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

Wakefield et al's No. 1 Weigle, NW SE SE Sec. 6-32-6.
Drlg. 375 ft.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
S.D. 2,450 ft.

ELLIS COUNTY

Ashby et al's No. 1 Mermis, NW cor. NE Sec. 34-13-16w.
Drlg. 1,425 ft.

ELLSWORTH COUNTY

Elwell et al's No. 1 Campbell, SW cor. Sec. 20-17-7w.
K.C. lime 2,785 ft.; 2,920 ft., H.F.W.; drlg. 3,045 ft.

Lario Oil & Gas Co.'s No. 1 Harbalek, SW NW Sec. 7-16-10w.
Rig.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12.
S.D. 335 ft.

HARVEY COUNTY

Hollow et al's No. 1 Summerfelt, NW NE NW Sec. 3-22-1w.
Hunton 3,310-55 ft.; pumped 247 bbls. 13 hrs. Will acidize.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-3w.
Drlg. 533 ft.

KINGMAN COUNTY

W. C. McBride, Inc.'s No. 1 Wolbridge, NW SE Sec. 16-27-7w.
Set 8-in. csg. 3,582 ft.; T.D. 3,609 ft.; cleaning out.

McPHERSON COUNTY

Marileen Oil and Goering Bros. No. 1 Decker, NW cor. SE Sec. 20-18-1w.
Siliceous lime 2,529-30 ft.; water; abd.

Roth-Farout et al's No. 1 Bestwater, SE SW SE Sec. 23-20-1w.
Building rig.

Tom Palmer and Phillips Pet. Co.'s No. 1 Moddelmog, NE NE NW Sec. 8-21-1w.
Chat 2,959 ft.; set 8-in. 2,963 ft.; drlg. 3,100 ft.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Rig; S.D.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w.
T.D. 700 ft.; cleaning out.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
Spudded.

Hartman Oil et al's No. 1 Stone, C NW NW Sec. 15-24-4w.
Mississippi lime 3,308 ft., pay 3,337-44 ft.; T.D. 3,352 ft.; pumped 3 bbls. oil per hour; acidizing.

RICE COUNTY

Darby Pet. Co. et al's No. 1 Taylor, NW SE SW Sec. 25-19-8w.
T.D. 2,749 ft.; S.D.

Deitrick et al's No. 1 Fitzpatrick, C NE NE Sec. 30-21-8w.
Set 6-in. 3,073 ft.; T.D. 3,100 ft.; U.R. 6-in. cleaning out.

Elwell et al's No. 1 Porter, NE NW Sec. 5-18-7w.
S.D. 3,330 ft.

Foraker, Nickerson et al's No. 1 Lyon, SE NW Sec. 27-20-8w.
Spudded and S.D.

Gypsy Oil Co.'s No. 1 Gibson, SW NW NE Sec. 4-21-10w.
T.D. 3,369 ft. in Siliceous lime; dry; P.B. to 3,322 ft.; set 5-in. 3,300 ft.

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Set. 10-in. 3,408 ft.; drlg. 3,755 ft.

Stark & Wells' No. 1 Smith, NW cor. Sec. 30-19-8w.
Location.

Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
U.R. 8-in. to 2,760 ft.

Robertson et al's No. 1 Johnson, NW cor. SW Sec. 22-19-8w.
Set 6-in. csg. 3,406 ft., Siliceous lime at 3,543-49 ft.; water; abd.

Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
Set 10-in. 2,060 ft.; drlg. 2,430 ft.

ROOKS COUNTY

Ashby et al's No. 1 Doughty, C SW SW Sec. 15-8-19w.
Oswald lime 3,186 ft.; pay 3,215-25 ft., T.D.; 8wbd. 8 bbls. oil per hour; acidized; pumped 70 bbls. in 6 hrs.; taking potential.

RUSH COUNTY

Schlegel & Turner's No. 1 Schmidt, C SW SE Sec. 10-17-16w.
Cellar.

RUSSELL COUNTY

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Rigging up.

Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
Spudded to 140 ft.

Tom Palmer et al's No. 1 Herbel, NW SW Sec. 4-12-11w.
Building rig.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-32w.
T.D. 2,628 ft.; fishing.

SEDGWICK COUNTY

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
Spudded.

(Continued on Next Page)

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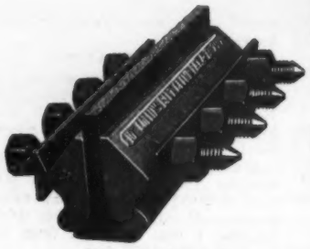

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cor. NW Section 23-25-3, was a hole full of water at 2,784 feet and was abandoned.

George Hinkle was building rig for No. 1-A L. Joseph, SE cor. Section 25-24-3. Al Becker had spudded No. 1-A Beadles, SW cor. NE Section 8-27-6.

Greenwood County

O. V. Paul and others had machine in for No. 1-A Wygle, NW cor. SW Section 12-27-10, Greenwood County, and Mohawk Oil Co. had machine in for No. 1-A Ferguson, C SE SW Section 4-27-11.

Henderson & Holden had ponds dug for No. 4 Harlan, C N half NW NW Section 34-22-11.

Eldorado Refining Co.'s No. 1 Lose, NW cor. NE Section 22-26-8, Greenwood County, was dry and abandoned at 2,480 feet.

McPherson County

Mabee and Shell Petroleum Corp.'s No. 8 Friesen, 330 ft. north and 1,325 feet east of SW cor. Section 33-21-3w, McPherson County, was completed after it had made a potential production of 808 bbls. in 24 hours from Hunton lime at 3,482-3,515 feet. It got a hole full of water from Wilcox sand at 3,637-42 feet and was plugged back.

Carey and others' No. 1 Bullinger, C NE NE Section 17-20-1w, was dry and abandoned at 3,598 feet. This test had Viola lime at 3,393-98 feet, which showed oil and water. It pumped 60 bbls. of oil in five minutes after an acid treatment but on a second treatment it showed mostly water.

Marileen Oil & Gas Co. and Boering Brothers' No. 1 Decker, NW cor. SE Section 20-18-1w, got a hole full of water from Siliceous lime at 3,529-30 feet, and was abandoned.

Dickey Oil Co. made a location for No. 1 Tull, NE cor. SW Section 13-19-3w.

California Fields

(Continued from Page 72)

administrator and in each case wells must be at least 500 feet apart.

Huntington Beach

Standard Oil Co. finished an unusually good well in the town lot section of the Huntington Beach Field during the early part of the current week when No. 68-B was brought in under a natural flow doing 2,554 bbls. of clean 24.1 gravity oil and 1,080,000 feet of gas per day from 4,400 feet. No. 23 P. E., another well of the Standard in this field, is rotating in the pay at 4,121 feet and should be on production within 10 days. Pacific Western Oil Co.'s No. 17 Rubel in the Inglewood, which was finished last week, showed a potential on the umpire's test of 1,944 bbls. of oil and 770,000 feet of gas per day from the third zone. The Standard has concluded drilling operations on No. 28 on Vickers Lease No. 1, and this project should be tanking oil in the near future. Operators in the Inglewood Field of Los Angeles Basin are limited to 12 wells per year and cannot drill more than one well to each 10 acres. This work has been so allocated that each operator knows just what development work he may undertake. In the Long Beach Field the Shell finished No. 1-A Horsch, but it was good for only 50 bbls. of 27.1 gravity oil cutting 20 per cent from 4,094 feet after the hole had been plugged back from 4,143 feet.

NEW YORK STATE PRODUCERS

OLEAN, N. Y., Sept. 17.—The annual meeting and banquet of the New York State Oil Producers Association will be held in Bolivar at a date to be set after the hearing for the Pennsylvania Grade crude oil region in Washington, September 21, the directors announce. Arrangements in Bolivar are under the direction of Al Shaner, president of Allegany Refiners, Inc.

CARL E. SLATT DIES

Carl E. Slatt, aged 49, former manager of the Hills Dome Lease Association, which is drilling a test well in Elbert County, Colorado, died in Denver as a result of an accident at Apex, Colo.

Kansas Wildcats

(Continued from Preceding Page)

Gypsy Oil Co. et al's No. 1 Tammany, NW NE Sec. 4-29-1w.
K.C. lime 2,850 ft.; drlg. 2,935 ft.
Jones, Kirk et al's No. 1 McQuillan, NE NW NE Section 21-29-2w.
Chat 3,618 ft.; T.D. 3,720 ft.; fishing.
Lassen et al's No. 1 Wall, C SE SW NE Sec. 4-28-1 (O.W.D.D.).
S.D. 3,260 ft.
D. R. Lauck et al's No. 1 Roy, SE SW Sec. 24-29-1w.
Running 15-in. pipe to 240 ft.
Syndicate O. & G. Co. et al's No. 1 Ratzlaff, NE NW NW Sec. 30-26-2.
Rigging up.
Trees Oil, Derby Oil et al's No. 1 McMinn, NW SW NE Sec. 36-26-1e.
U.R. 6-in. csg. 3,010 ft.

SUMNER COUNTY

Morgan & Flynn's No. 1 Mercer, NW NE NW Sec. 36-32-1w.
H.F.W. in Wilcox, 4,130-39; abd.
Wentz and Continental's No. 1 Small, NW SW Sec. 5-33-4w.
T.D. 4,000 ft.; fishing.
Wentz et al's No. 1 Horsley, CSL SW SW SW Sec. 18-35-1.
Drlg. 900 ft.

TREGO COUNTY

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
T.D. 3,420 ft.; U.R. 10-in. csg.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 Penwell, NE NW SE NE Sec. 16-3-3 (O.W.D.D.).
Old T.D. 1,720 ft.; R.U. and S.D.

WOODSON COUNTY

C. L. Sheedy et al's No. 1 Hassenpflug, SE NE Sec. 2-26-14.
Drlg. 350 ft.
Schwartz et al's No. 1 Collins, SW NW NE Sec. 30-23-14.
Drlg. 610 ft.

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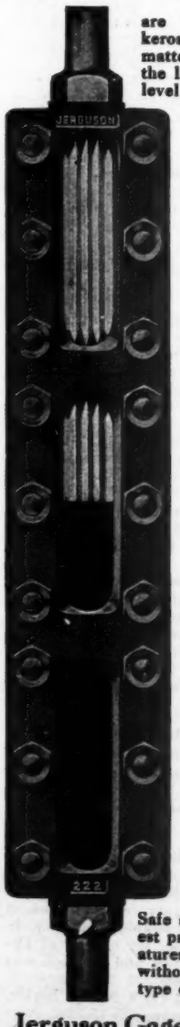

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Deepest Well in the South Turner Valley Is Estimated 150 to 200 Bbls. Daily

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Sept. 15.—In the South Turner Valley Field, Century Royalties' No. 1, LSD 14, Section 28-18-2w5, is being finished at 6,540 feet. Wet gas production, estimated around 12,000,000 feet a day, comes from a brown porous lime horizon 700 feet in the Madison. Bailing of rotary fluid had been under way a short time when the well started to flow by heads, gradually clearing itself by fluid. No definite production test has been made, but potential crude naphtha recovery is estimated between 150 and 200 bbls. a day. Century's No. 1 started drilling on February 12, and elapsed drilling time for 6,540 feet totaled six months and 21 days. It is the deepest production in the field, though two other wells, McLeod Oil Co.'s No. 4 and British Dominion Oil & Development Corp.'s No. 1, both in the central field, have been carried to greater depth. Century's No. 1 is a westerly offset to Becker Syndicate's No. 2 Anaconda in LSD 15, which got a large production at approximately 1,000 feet less depth. Still farther west, Turner Valley Royalties' No. 1, LSD 13, has been standing at 3,055 feet, pending results of the Century test which indicated very deep drilling in the northwest corner of the section.

In Section 28-18-2w5, several other tests are getting close to the producing horizon. Pacalta Oils' No. 1, LSD 7, is taking some crude naphtha production from the lime at 5,120 feet, while waiting for rotary outfit. In the southeast corner, Spooner Oils' No. 5 Anaconda, LSD 1, is setting casing just above the lime at 5,400 feet, with considerable light crude in the hole. Carleton Royalties' No. 1, LSD 2, is drilling in the Blairmore below 3,500 feet and logging 130 feet higher than Highwood-Sarcee's No. 1 producer. Renfrew Royalties' No. 1 Morris & Goodfellow, LSD 3, has resumed from 585 feet after cementing surface casing.

British Dominion Oil & Development Corp.'s No. 4, LSD 6, same section, is in the lower Benton formation below 3,200 feet. Publix Oil & Gas Co.'s No. 1, LSD 8, is just above the lime at 4,920 feet. In the northeast corner, Director Royalties' No. 1, LSD 16, is fishing at 4,470 feet.

In Section 21-18-2w5, Myers & Wright's No. 2 Pacalta, LSD 14, offsetting Highwood-Sarcee's No. 1 producer to the west, is below 1,210 feet. Highwood Royalties' No. 1 Oliver, LSD 3, is below 2,100 feet.

In Section 34-18-2w5, Nolan-Hungerford Royalties' No. 1 Rand, LSD 5, is in the cardium sandstone below 1,675 feet, logging somewhat higher than adjacent producers. Merland Oil Co.'s No. 2, LSD 13, Section 27-18-2w5, is moving equipment. Mercury Oils' No. 6, LSD 12, Section 4-19-2w5, is below 2,705 feet, with casing at 2,685 feet.

In the Central Turner Valley, New McDougall-Segur Oil Co.'s No. 7, Section 12-20-3w5, is drilling in hard formation below 3,390 feet with a light crude pay expected about 3,500 feet.

Famous Well Abandoned

Royalite Oil Co.'s No. 4, LSD 12, Section 7-20-2w5, in the Central Turner Valley Field, famous 10 years ago as the "million-dollar gusher," which first tapped the crude naphtha horizon in the dolomitic limestone, is being abandoned after being off production for several years. Shortly after the merger of the Dingman and Imperial interests in the Royalite Oil Co., No. 4 was started as an entirely new test of the deeper formations. Gas, encountered in the upper horizons, was utilized for one winter to supply Calgary; after which deepening was resumed in the spring of 1924. The dolomitic lime was regarded as a nonproductive horizon and drilling was continued largely for geological information. On October 14, 1924, a wet gas flow of 22,000,000 feet a day was struck in the Madison at 3,740 feet, the pressure jamming and then cutting the 1-inch steel drilling cable. The well caught fire and was extinguished with difficulty; and later the well, partially under control, for five years recorded a crude naphtha recovery of 500 bbls. a day or better. It is reputed to have produced 1,000,000 bbls. of naphtha in the course of its career, with gross revenues from naphtha and gas production running close to $5,000,000. Eventually both gas flow and pressure declined. When the well first came in the tools were lost in the hole, and the huge initial flow came from a hole estimated to be only 2 inches in diameter. Casing is now being pulled and the hole plugged.

Turner Valley Production

Pipe line runs from the Turner Valley Field to the Imperial and Bell refineries in August totaled 88,443 bbls. compared with 89,352 bbls. in July. Deliveries to the Imperial Oil Refineries in August included 7,388 bbls. of clear naphtha, 68,603 bbls. of discolored naphtha and 6,287 bbls. of crude oil; comparing with July figures of 9,013 bbls. of clear naphtha, 64,830 bbls. discolored naphtha and 6,371 bbls. of crude oil. Deliveries to the Bell Refining Co. totaled 6,165 bbls. against 9,133 bbls. in July.

For the eight months ending August 31, 1934, the pipe line deliveries from the field totaled 720,075 bbls. against 440,471 bbls. in 1933 and 506,484 bbls. in 1932. The 1934 total is the largest since the boom year of 1930, when 763,099 bbls. were delivered in the eight months. It represents a gross revenue to producers of approximately $2,000,000; and indicates a probable total production for the year of 1,000,000 bbls. or better.

This potential total may be further increased by production from wells now nearing completion, and the output of the new gasoline absorption plant in South Turner Valley.

Pressure Tests Completed

William Calder, director of the petroleum and natural gas division of the Alberta lands and mines department at Edmonton, reports that pressure tests in the Turner Valley Field, commenced on August 20, have been completed. Complete data will not be available till the end of September, but the pressures obtained show some improvement compared with the results of tests last year. Readings were taken at 96 wells, this being the third test under the provincial government's conservation plan. An important feature of the improvement is the reduced wastage of gas per barrel of naphtha recovered, while the daily loss in pressure is considerably less than in 1930-31.

Shareholders of the Anaconda Oil Co. held their annual meeting at Calgary, when the following directors were elected: A. J. Scott, A. C. Johnson, J. T. Atkinson, Major A. C. Landale and H. H. Gilchrist, all of Calgary; O. L. Reinecke of Claresholm, Alberta, and Dr. Robert MacKenzie of Vancouver, British Columbia.

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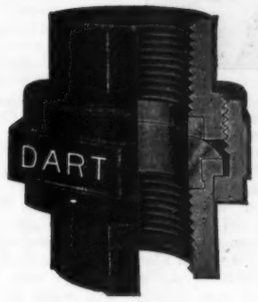

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HOUSTON, TEXAS

Nine Cooper Pool Wells Estimated 48,730 Bbls.; Seismograph Crews Busy in Eastern Colorado

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Sept. 17.—Initial production of nine wells so far completed in the new Cooper Pool in Lea County, New Mexico, estimated on the basis of short gauges, is 48,730 bbls. daily. The last completion is Phillips Petroleum Co. and Pure Oil Co.'s No. 3 Woolworth, which flowed 310 bbls. in 56 minutes. Same interests' No. 4 Woolworth, gauged 281 bbls. an hour. One new location was released by the Gypsy Oil Co. The Texas Co. is starting two wells which will test out the productive area of the new North Lea Pool. Texas Co.'s No. 1 Rector, in the Eunice Pool was estimated at 100 bbls. an hour on a drill stem test. Tidewater Oil Co.'s No. 2 State-Foster, in the same pool, is a near completion. Shell Petroleum Corp.'s No. 4 Grimes, in the Hobbs Pool, gauged 171 bbls. an hour. A new location was made in the Maljamar Pool. One new operation was reported in Chaves County.

Several seismograph crews are working in eastern Colorado. One new operation was reported in Archuleta County, and the Stanolind Oil & Gas Co. has made a new location on the Iles Dome in Moffat County.

Earl W. Reeder, Inc., is reported preparing to move two rotaries into the Overland Dome District, in Carbon County, Wyoming. The Lenco Petroleum Co.'s No. 3 Rousseau, in Oregon Basin, gauged 960 bbls. the first day. Resolute Oil Co.'s test on Badger Basin, which will be one of the deepest wells in the Rocky Mountain area, is resuming. The Wyoming-California Petroleum Co. has a gas well in South Baxter Basin and will drill a deep test for oil. A 4,000,000-foot gasser was reported on the Hidden Dome in Washakie County.

Three completions, one a flowing well and two dry holes, and seven new locations were reported in the Cut Bank Field in Montana. Drilling in the Kevin-Sunburst Field is on the increase and two completions and three new locations were reported. Fletcher E. Hunt's test on the Hobson Dome is being abandoned.

Washington well reports show of green oil.

NEW MEXICO

The completion of several large wells in the new Cooper Pool in Lea County with indications pointing definitely to the opening up of an area of major production is causing concern as to the extent of the drilling campaign which will result. The development program approved by Administrator Ickes called for 12 wells as the limit for 1934, and any calendar year. Obviously it is impossible to stay within this limit during the current year as nine wells already have been completed and eight more are under way with some of these operations calling for offsets. It appears to be a reasonable assumption that 25 wells all told will be drilled this year. The operators attempted an agreement on this allocation, but so far efforts to reach an understanding as to the number of wells to be drilled have failed.

Up to the present time Phillips Petroleum Co. and the Pure Oil Co. have jointly completed four wells, the General Crude Oil Co. three, Humble Oil & Refining Co. one and Stanolind Oil & Gas Co. one. Operations under way, or for which locations have been made, include one by the Gypsy Oil Co., one for the Texas Co., two for Humble Oil & Refining Co. and four for Phillips Petroleum Co. Locations for several required offsets have not yet been released.

The initial production of the nine wells so far completed, based on less than one-hour gauges in some instances, is estimated at 48,730 bbls. a day. Under the proration schedules these are pinched to a maximum of 172 bbls. daily each. These wells are as follows:

	Bbls.
Phillips' No. 1 Woolworth	4,300
Phillips' No. 2 Woolworth	3,600
Phillips' No. 3 Woolworth	8,000
Phillips' No. 4 Woolworth	6,740
General Crude's No. 1 Meyers	5,400
General Crude's No. 2 Meyers	7,290
General Crude's No. 1 Cushing	2,400
Humble's No. 1 Cooper	1,000
Stanolind's No. 1 Meyers	10,000

Cooper Area

Phillips Petroleum Co. and Pure Oil Co.'s No. 3 Woolworth, SW cor. NW Section 23-24-36, an east offset to the Stanolind Oil & Gas Co.'s No. 1 Meyers, and a north offset to Phillips' No. 1 Woolworth, gauged 310 bbls. in 56 minutes through the 2½-inch tubing and a 2-inch opening on the casing, or at the rate of 8,000 bbls. a day, with 5,200,000 feet of gas. The pay was at 3,484-3,512 feet and total depth is 3,512 feet and elevation 3,337 feet.

Phillips Petroleum Co.'s No. 4 Woolworth, C SW SW Section 23-24-36, was drilled to a total depth of 3,509 feet and gauged 281 bbls. an hour through the 2½-inch tubing and a 2-inch opening on the casing, with 4,000,000 feet of gas. The tubing was run to 3,508 feet and the pay was at 3,483-3,509 feet. The elevation is 3,341 feet.

Gypsy Oil Co. released a new location in its No. 1 Cooper, C SW NE Section 23-24-36, an east offset to the General Crude Oil Co.'s No. 1 Cushing, for which cellar has been completed.

Phillips' Petroleum Co.'s No. 8 Woolworth, C NE NE Section 3-25-36, to the south of the development and 1½ miles north of the nearest producer in the Jal Pool, is temporarily an abandoned location and the number has been changed. A new location to be known as No. 8 Woolworth is in the C SW SE Section 22-24-36, for which cellar is being dug.

Phillips Petroleum Co.'s No. 5 Woolworth, C NE NE Section 27-24-36, is building derrick, and its No. 6 Woolworth, C NW NW Section 26-24-36, is a cellar. Its No. 7 Woolworth, C SE SW Section 23-24-36, is building derrick.

Humble Oil & Refining Co.'s No. 1 Conts, C NW NE Section 10-24-36, is drilling at 2,460 feet in salt and anhydrite and encountered an air pocket at 1,314-28 feet. Same company's No. 1 Thomas, C SW SE Section 23-24-36, is rigging up rotary. The Texas Co.'s No. 1 Ogg, C SW NE Section 35-24-36, about midway between the Jal and Cooper Pools, is drilling at 3,080 feet in lime and had a show of gas at 3,065 feet.

Jal Area

Repollo Oil Co.'s No. 1 Gloyd, SW cor. SE Section 12-25-36, is rigging up rotary, and same company's No. 1 Hanagan, SE cor. SW Section 12-25-36, is rigging up rotary. Empire Gas & Fuel Co.'s No. 2-B Linden, NE cor. SW Section 13-25-36, is rigging up rotary after setting the 12½-inch at 71 feet with 20 sacks.

North Lea

The Texas Co.'s No. 1 Lea, SW cor. NW Section 14-20-34, the discovery well in the new pool to the north of Lea, is listed as a completion after plugging back and testing for some time. Shortly thereafter the rig caught fire and was destroyed. However, it had been shut in for orders under the United States pooling agreement. It was drilled to 3,688 feet, in lime, and plugged back to 3,600 feet where it made an initial production of 88 bbls. a day of pipe line oil. The pay was at 3,555-80 feet and the oil is 32 degrees gravity on the A.P.I. scale.

The Texas Co. has completed cellar and pits for a test 4 miles to the north and a little to the west of the discovery in its No. 1 Swearingin, C NE SW Section 8-20-34. It is also 1½ miles north and a little east of No. 1 Jewett and McDonald, a small well which has been on production for several years. Another location is the same company's No. 1 Elliott, C NE NE Section 22-20-34, two-thirds of a mile southwest of No. 1 Lea, the discovery well. These two tests are expected to reveal important information as to the probable extent of the new pool.

Eunice Area

The Texas Co.'s No. 1 Rector, C NE SE Section 30-21-36, more than a mile to the south of the nearest producer in the Eunice Pool proper and three-fourths of a mile to the northeast of the Continental Oil Co.'s No. 1 Lockhart, is a near completion and looks like it will be a good well, and an important extension of the pool. It is bottomed at 3,942 feet in lime. A drill stem test was made at 3,802-3,902 feet and 5 feet of oil went into the separator in two minutes. A company estimate placed the showing at 100 bbls. an hour. The 7-inch is being run to 3,902 feet.

Ohio Oil Co.'s No. 2 State-McDonald, C NW SW Section 14-22-36, 6 miles south of the Eunice Pool proper, is bottomed at 3,841 feet in lime and anhydrite and preparing to run casing. A later report says it has come in as a big gas well. The Shell-Devonian's No. 1 State, C SW NE Section 30-21-36, is drilling at 3,010 feet in anhydrite and lime, and the Repollo Oil Co.'s No. 1 State, NE NW NE Section 19-21-36, is bottomed at 3,940 feet in lime and preparing to run tubing. Test at 3,827-48 feet showed 4,500,000 feet of dry gas.

The Tide Water Oil Co.'s No. 2 State-Foster, C SE NE Section 8-21-36, is a near completion and is connecting up to test. Total depth is 3,906 feet, in lime, and the 2-inch is at 3,894 feet. Same company's No. 3 Coleman, C NE NE Section 17-21-36, is drilling at 1,310 feet in red rock and anhydrite. The Gypsy Oil Co.'s No. 1 Bell-Ramsey, C NW SW Section 9-21-36, is bottomed at 3,910 feet and is running the 4¾-inch to test. Continental Oil Co.'s No. 17-A-4 Meyers, C NE SW Section 17-21-36, is fishing for drill stem at 3,190 feet, total depth, and its No. 8-B-1 Meyers, C SE NW Section 8-21-36, is drilling at 3,455 feet. Same company's No. 8-A-2 Meyers, C SE SW Section 8-21-36, is building derrick.

Hobbs Area

Shell Petroleum Corp.'s No. 4 Grimes, NE cor. SW Section 28-18-38, was listed as a completion at 4,230 feet, total depth. The packer was set at 4,086 feet and it tested 99 bbls. an hour. It was then treated with 1,000 gallons of acid and tested 171 bbls. an hour. The packer will be reset at 4,042 feet and again tested.

Gypsy Oil Co. has a near completion in its No. 9 West Grimes, NW cor. SW Section 32-18-38, which is preparing to test. It was drilled to 4,185 feet and the 7-inch was set at 3,964 feet with 150 sacks. Shell Petroleum Corp.'s No. 1-D State, SE cor. NW Section 24-18-37, is drilling at 3,846 feet, in lime, and its No. 1 Sanger, SW cor. Section 27-18-38, is drilling at 1,375 feet in red beds.

Pipe Line Runs

Pipe line runs in August from Lea County pools were as follows:

	Bbls.
Eunice	106,942
Jal	94,315
North Lea	585
Lea	85,869
Cooper-Lynn	21,579
Hobbs	1,128,849

Hobbs runs brought the total since proration went into effect on July 10, 1930, up to 48,492,622 bbls. Prior to proration, the field total was 1,009,277 bbls. Cooper-Lynn runs for August included 8,427 bbls. from four new wells on special allowance. Jal runs included 756 and 1,608 bbls. special allowance from two new wells, and Eunice runs included 1,093 and 4,027 bbls. special allowance from two new wells.

Maljamar Area

The first new operation reported in the Maljamar area for some time is the Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, which is building road to location. It is located 1,320 feet south of the discovery well in the pool and half a mile southeast of No. 3 Baish, which was completed in 1930 at 4,169 feet for 177 bbls. natural the first 24 hours.

Eddy County

Etz, Hammond & Keyes' No. 1 State, C SE SE Section 16-17-28, Artesia area, is drilling at 1,700 feet in anhydrite, and Tignor, Etz & Keyes' No. 1-A Keyes, C SE SW Section 10-17-28, had 70 feet of oil in the hole at 1,450-1,520 feet and is drilling at 1,592 feet in sandy lime. Skelly Oil Co.'s No. 1 Lea, C NW NW Section 23-17-31, Maljamar area, is drilling at 3,329 feet. Guess & McIntosh's No. 1 State, NW cor. Section 8-26-28, Red Bluff district, is shut down at 2,015 feet in salt. The A. & M. Petroleum Co.'s No. 1 State, SW NE Section 15-21-27, Carlsbad area, is drilling at 315 feet in anhydrite and lime.

Chaves County

A new operation in the Roswell district is the Comanche Drilling Co.'s No. 1 Sloop-Purcell, NE cor. SE Section 10-11-26, a location. The Hinkle location reported here last week will be carried as the Roswell Oil Syndicate's No. 1 Hinkle, C NE SE Section 17-11s-27. C. J. Frank and others' No. 1 Roswell Insurance Co., NE cor. SE Section 30-11-25, is drilling at 600 feet in yellow rock.

San Miguel County

Cabra Springs Oil & Gas Co.'s No. 1 Cabra Springs ranch, SW NE NE Section 22-12-22, Pino Mesa, is fishing for tools at 3,803 feet, and its No. 2 West Pino Mesa, CWL Section 19-12-22, is rigging up.

Santa Fe County

Elmer Fisher's No. 1 Hill, Section 6-10n-7e, Barton district, is drilling at 2,045 feet in gray sandy lime.

Valencia County

The Western Natural Resources Corp., Inc.'s No. 2 San Clemente grant, SW cor. NE Section 5-6n-1e, De Chaves dis-

trict, has finished rigging up rotary and is cleaning out to resume at 5,155 feet.

Bernalillo County

Norins Realty Co., Inc.'s No. 1 Gallegas grant, C NW NW Section 19-11n-4e, northeast of Albuquerque, has derrick completed and is negotiating a 5,000-foot drilling contract.

Torrance County

Witt Oil & Gas Co.'s No. 3, NE SW Section 12-7n-7e, which is being completed as a carbon dioxide well, will use the gas for a dry ice plant put into operation the past few weeks. The plant has a capacity of 15 tons a day.

San Juan County

Nick Spatter's No. 1, C NE SW Section 32-31-11w, Aztec district, is drilling at 900 feet, and the Aztec Oil Producers, Inc.'s No. 2, C SE SE Section 28-30-11, has recovered tools, made a formation shutoff at 1,223 feet and is preparing to resume at 1,478 feet.

COLORADO

While there is no drilling activity reported in eastern and northeastern Colorado, there is considerable geological work under way and interest in that territory is by no means abated. Indian Territory Illuminating Oil Co. has a crew shooting immediately south and west of Wray, in Yuma County, near the eastern boundary of the state. Continental Oil Co. has a crew shooting around Hugo, in Lincoln County, in several directions from that town, and the Colorado Geophysical Corp. has been doing considerable work in the vicinity of Stratton, in Kit Carson County. There is a report to the effect that another crew is working in Las Animas County, but it has not yet been confirmed. Early in the summer there were several crews working in various parts of northeastern Colorado, particularly in and about the Greasewood district in Weld County.

Adams County

Riddle Petroleum Co.'s No. 1 Baxter, C SW Section 2-3s-66, Derby district, has derrick completed and is waiting for tools.

Archuleta County

An operation not heretofore reported is the Navajo Oil Co.'s No. 1 Crowley, SW cor. NE Section 11-32-1e, Chromo district, which spudded September 1 and is waiting for pipe on top of the Muddy sand at an unreported depth. Shows of gas and oil were encountered just above the sand. The location is reported to check about 100 feet higher than Nos. 5 and 6 Crowley, drilled in this district by the Oil City Petroleum Co.

The Oil City Petroleum Co.'s No. 2-X Garnett, NE cor. Lot 3, Section 25-33-1e, Price district, is drilling at 450 feet.

Boulder County

Leslie R. Steel's No. 1 Cole, NW cor. NE Section 33-1n-70, Parallel Dome, is drilling in shale at 1,850 feet, showing a little gas and is feeling for the gas horizon expected at about this depth.

El Paso County

Colorado Springs Oil & Natural Gas Co.'s No. 2 Carson, NW NE NE Section 10-16-66, Fountain district, which has been shut down for two years at 2,000 feet, has resumed, cleaned out 500 feet of cavings and is drilling ahead at 2,200 feet.

Grand County

Colorado Oil & Refining Co.'s No. 1 Linke, NE SW SW Section 13-1n-77, Granby district, is shut down at 1,500 feet, and is believed to be on top of the third sand. It is showing considerable gas. The 8¼-inch is at 1,120 feet.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View district, is bottomed slightly below 2,050 feet with a heavy show of wet gas and streaks of oil, and is underreaming the 5-7/8-inch from 2,500 feet to bottom. It is believed to be near the horizon which showed gas at around 3,400 feet in a well drilled nearby several years ago by the Panuco Exploration Co. Same firm's No. 2 Ojo, NE cor. SE Section 4-29-69, is shut down at 150 feet.

Jackson County

The Colorado Oil Refining Co.'s No. 1 North Park Coal Co., NW NW Section 18-9n-78, North McCallum, is shut down at 1,805 feet. Continental Oil Co.'s No. 3 Hoye, NW cor. NE Section 34-9n-78, South McCallum, is drilling at 1,564 feet. The 15½-inch is at 533 feet.

Moffat County

Stanolind Oil & Gas Co. has made a location on the Iles Domes for its No. 14-SD Parkinson, CSL NE SW Section 22-4n-92. Mountain Fuel Supply Co.'s No. 4-B Wilson, C NE NW Section 23-12-100, Hiawatha Dome, cored into the Laramie sand at 3,787 feet and found nothing commercial and is plugging back to 2,337 feet to test a show of oil. Sand at 2,304-37 feet in the lower Wasatch flowed 24 bbls. in 26 hours on a test for that length of time. The Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is bottomed at 2,080 feet and underreaming the 8¼-inch at 2,073 feet.

Park County

South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11-75, Hartsel district, is drilling at 167 feet. It had a small show of gas and rainbows at 102-30 feet in sand.

Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, raised the 6⅝-inch to underream and then lowered and set it at 3,664 feet, securing a complete water shutoff, and is drilling at 3,753 feet in lime. Several geologists have identified the horizon as part of the Lansing-Kansas City lime.

Routt County

The Texas Co.'s No. 8 Quaintance-Hocking, NE SW NE Section 18-6n-86, Tow Creek, is drilling at 370 feet.

WYOMING

Albany County

California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, Quealy Dome, began spudding September 12 with rotary tools. This structure was tested in two locations several years ago. The new operation was located on the basis of a seismograph survey made by John H. Wilson.

Big Horn County

W. O. Taylor and others' No. 1 Hoskins, SE SE Section 25-56-97, Byron Dome, which is being deepened to the Madison lime with rotary under a contract with S. H. Keoughan, is drilling at 4,150 feet. The Ohio Oil Co.'s No. 2 Byron-Union, C SE NE Section 22-56-97, is drilling at 4,451 feet. Peter Evanoff and others' No. 1 Griffin, Lot 60, Section 4-55-97, has rig completed and the operator has been granted permission by Secretary Ickes, of the Department of the Interior, to proceed with the well to test the Embar and Tensleep, but with the provision that it shall not go to the Madison. The location is inside a unitized area, but the operator is not a party to the unit agreement.

Converse County

Wyoming Southern Oil Co.'s No. 1 rown, 541 feet west of C Section 27-32-69, Shawnee district, which has been shut down at 665 feet for several months, is reported to have had some gas with water at that depth and that it will be completed as a water well. Same interests have made a location for No. 2 Brown, C NE SE Section 27-32-69, which is expected to be a deep test.

Carbon County

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, was last reported drilling at 5,390 feet. It is reported that these interests are preparing to move in two rotaries and drill two additional wells as a result of the oil showings encountered

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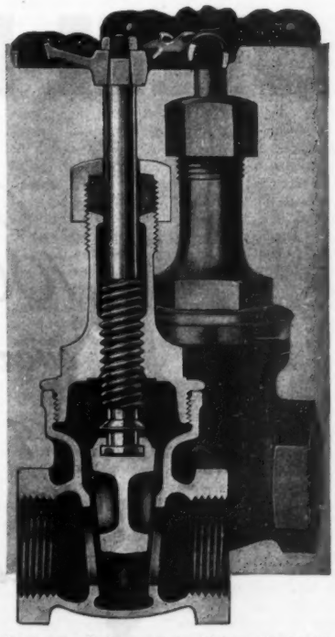

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in this test. Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is waiting after cementing the 9⅝-inch at 2,360 feet. Total depth is 2,641 feet. The Sinclair-Wyoming Oil Co.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is drilling out cement at 3,412-32 feet. New total depth is 3,528 feet. M. K. Quealy's No. 1 Albert, SE SW Section 17-25-79, Shirley Dome, is an abandoned location following the death of Mr. Quealy. Materials were moved in last year.

Fremont County

Monongahela Oil Co.'s No. 1 Jones, NW cor. Section 7-28-92, Spring Creek, topped a gas sand at 1,090 feet. Coring started at 1,025 feet. It may be necessary to bridge the hole to set casing before a test can be made. Same company's No. 1 Wisda, NE SE SE Section 13-28-93, Crook's Gap, is shut down at 2,790 feet. An operation not heretofore reported is Nelson & Pouppiert's No. 5, SW SE NW Section 27-3n-1w, Pilot Butte, which is drilling at 200 feet. Tropic Oil Co.'s No. 1 Government, C SE SW Section 34-27-90, Lost Soldier district, is underreaming the 6¼-inch at 1,930 feet, total depth. Mid-American Oil Co.'s No. 1 Government, NE SW Section 4-28-92, Sheep Creek, is drilling at 2,290 feet. Rig may be skidded back from fault and another test drilled.

Lincoln County

Senrab Oil Co.'s No. 3 Government, N SE NW Section 10-26-113, La Barge district, is drilling at 300 feet.

Niobrara County

An old well drilling deeper is the Interstate Oil & Refining Co.'s No. 2 Ohio-Butte, NW SW NW Section 1-39-61, West Mule Creek, drilling at 325 feet. Same company's No. 1 Morrell, NW NE SE Section 2-39-61, deep test, is 2 feet in sand at 2,840 feet and is reported to have 1,500 of oil in the hole through 500 feet of cavings. Cleaning out and underreaming 4¾-inch is in progress.

Park County

Lenco Petroleum Co.'s No. 3 Rosseau, SW SE NW Section 33-51-100, Oregon Basin, reported a completion last week at 3,660 feet, gauged 960 bbls. first 42 hours. Dry Creek Oil Co.'s No. 1 Government, NE SW Section 9-50-100, in fault block at the south of the structure, killed flow of 14,000,000 feet of gas in the first Frontier at 900 feet, set casing at 935 feet and is drilling at 946 feet. Paul Stock's No. 2 Government, SW SE NE Section 29-51-100, is drilling at 2,857 feet in the red beds.

Resolute Oil Co.'s No. 1 State, C NW SW Section 16-57-101, Badger Basin, which cemented the 9⅝-inch on bottom at 3,608 feet with 925 sacks last fall and shut down, has resumed and is drilling at 3,660 feet. This is the second well drilled on the structure, the discovery well being the deepest well drilled in the Rocky Mountain area at 8,725 feet.

Stanolind Oil & Gas Co.'s No. 6 Rosenberg, NW cor. Section 25-58-98, Frannie Field, cored to 2,719 feet and showed good oil saturation and is waiting after cementing the 6⅝-inch at 2,710 feet. The top of the Embar was at 2,650 feet and the Tensleep at 2,713 feet.

Sublet County

Calmonica Petroleum Co.'s No. 17-3 Elkhorn, NW cor. NE Section 17-27-113, is drilling at 1,430 feet.

Sweetwater County

Wyoming-California Petroleum Co.'s No. 2 Union Pacific, SE NW SW Section 11-16-104, South Baxter Basin, set the 8⅝-inch at 2,448 feet and is drilling in the first bench of the Wall Creek at 2,460 feet with a flow of gas estimated at 12,000,000 feet a day. The gas is reported free of sulphur and to have a petroliferous odor. The location is about 2 miles north of the nearest well drilled last year by the Mountain Fuel Supply Co. It will be completed as a gas well for fuel and another well to test all possible horizons will be drilled at another location.

Washakie County

Wyoming Oil & Gas Co. and others' No. 1 State, SE cor. Section 36-48-91, Hidden Dome, is drilling at 1,620 feet with a flow of 4,000,000 feet of gas and some oil in top of the Frontier at 1,603 feet. The location is to the northwest of the two small oil wells completed last year on the structure.

MONTANA

Glacier County

Three completions, one of which came in as a flowing well and two practically dry holes and seven new locations were reported in the Cut Bank Field.

Montana Power Gas Co.'s No. 1 Van Ormer, C SE SW Section 8-33-5w, to the southeast of the town of Cut Bank and three-fourths of a mile from the nearest producer, flowed and swabbed 410 bbls. first 24 hours at 2,908 feet, total depth, from sand at 2,835-2,905 feet. The 7-inch is at 2,860 feet.

Nyhagen-Bell's No. 3 Anderson, NE NW SW Section 26-35-6w, on the west side of the field, proved to be a failure at 2,890 feet. It had a show of oil at 2,872-78 feet and found the Cut Bank sand at 2,865-78 feet. Oil rose 300 feet in the hole and after standing seven days stood only 650 feet in the hole.

The Texas Co.'s No. 1 Kennerly, E NW NE Section 22-34-6w, had light saturation at 2,902-25 feet with water, 80 feet of fluid rising in the hole in 19 hours. The lower Cut Bank was at 2,890-2,925 feet and total depth 2,958 feet. It will be plugged and abandoned.

A. B. Cobb's No. 3 Walberger, NE SW SE Section 35-35-6w, which has the record for the best producer in the field, continues to flow 225 to 250 bbls. a day. It is now in its third week.

New locations are as follows:

R. C. Tarrant's No. 5 Haglund, Jr., C SW NE Section 13-34-5w, rig: Nadeau Brothers' No. 4 Van de Mar, C SW NE Section 35-35-6w, rigging; Montana Power Gas Co.'s No. 1 Gaines, C NW NE Section 6-33-5w, digging cellar; Lawler & Hoer's No. 2 Harland, C NW NW Section 8-33-5w, spudding at 75 feet; Hannah-Porter Co.'s No. 2 Britton, SW NE NE Section 23-34-6w, rigging up; P. B. Anderson and others' No. 2 Anderson, E SW NW Section 26-35-6w, location; Dakota-Montana Oil Co.'s No. 2 Winkler, W NE NW Section 26-35-6w, location.

Alberta-Pacific Consolidated Oil Co.'s No. 4 Keisel, SW cor. NW Section 11-34-6w, set the 7-inch on bottom at 2,859 feet with 50 sacks.

Consolidated Gas Co.'s No. 2 Ewing, SE SE Section 34-35-6w, is drilling at 1,830 feet. The Colorado contact was at 580 feet. Craig & O'Neil's No. 1 Fisk and others, C NE NE Section 21-34-6w, is rigging up. Lon Crumley's No. 1 Jones, C NW SE Section 31-34-5w, topped the Colorado at 420 feet, set the 12½-inch at 450 feet and is drilling at 1,150 feet.

Fulton and Nadeau's No. 2 Haggerty, C NW NW Section 15-34-6w, is driling at 2,865 feet.

Grant Oil Co.'s No. 2 Yunck, C SW SW Section 14-34-6w, is drilling at 2,825 feet.

Indian Oil Co.'s No. 1 Reickhoff, SW SE Section 3-34-6w, is drilling at 200 feet, and its No. 2 Winkler, W SW SW Section 23-35-6w, is drilling at 2,065 feet.

R. C. Jeffries' No. 1 Lukes, C SE SE Section 1-33-6w, is digging cellar.

Montana Headlight Oil Co.'s No. 3 Yunck, W SW SW Section 1-34-6w, set the 10¾-inch on bottom at 510 feet with 50 sacks. Montana Power Gas Co.'s No. 1 De Zort Unit, S half S half Section 23-35-5w, is drilling at 2,000 feet, and its No. 1 Pioneer Lumber Unit No. 1, SE cor. Section 21-35-5w, set the 8¼-inch at 2,735 feet and had 2,000,000 feet of gas in the Sunburst at 2,735-38 feet. Same company's No. 1 Scheuren, C SW SW Section 21-33-5w, is drilling at 600 feet.

Olive Oil Co.'s No. 3 Winkler, NW Section 35-35-6w, is straightening hole at 60 feet.

Par Oil Co.'s No. 4 Haines, E SE SE Section 2-34-6w, is standing rigged.

Santa Rita Oil & Gas Co.'s No. 4 Cardwell, NE NE Section 22-35-6w, is drilling below 100 feet, and its No. 4 Tribal, C N half SW Section 15-35-6w, is drilling at 1,760 feet.

R .C. Tarrant's No. 2 Getty, NW cor. SE Section 2-34-6w, is fishing for bailer at 2,200 feet, and his No. 1 State, C SE SE Section 36-34-6w, is drilling at 2,065 feet. The Texas Co.'s No. 1 State 327-30, C SE NE Section 36-34-6w, topped the Colorado at 517 feet, set the 10¾-inch at 548 feet, and is drilling at 730 feet. Same company's No. 1 Hessler, C NE NW Section 20-33-5w, is drilling at 2,176 feet, and its No. 5 Hinkle, C NE NE Section 2-34-6w, cemented the 7-inch at 2,760 feet.

Watson and others' No. 1 Simero, NE SW NE Section 1-33-6w, is drilling at 475 feet.

Toole County

The Kevin-Sunburst Field is showing an unusual spurt of activity, credited principally to increased production from the acidizing of wells. Two completions and three new locations were reported. E. R. McKee's No. 7 fee, NW SW Section 19-35-1w, made 10 bbls. initial at 1,513 feet, total depth. Vanderpass-Hepstad's No. 8 Helgerson, NW NW Section 28-35-1w, was completed for 8 bbls. at 1,555 feet.

New locations are: A. C. Crumley's No. 5 Fryberger, SE cor. SW Section 24-35-2w, is drilling at 515 feet. The Imperial Petroleum Co.'s No. 14 Bluhm, C NE NE Section 19-35-1w, is drilling at 200 feet. Frank & Miller's No. 1 State, S NW SE Section 36-34-1w, is drilling at 230 feet.

Engelking-Pfabe's No. 6 Seabrook, C NW NE Section 30-35-2w, is drilling at 450 feet, and S. V. Day's No. 2 Halter, SE NE NE Section 17-35-2w, is drilling at 1,395 feet. Lon Crumley's No. 4 Shaw, NE SW Section 35-35-2w, is drilling at 1,470 feet, and A. Beardsley's No. 3 Swears, C SE NW Section 9-35-2w, is drilling at 1,200 feet. The Bi-State Oil Co.'s No. 3 Haemel, E SE NE Section 3-34-1w, is drilling at 600 feet. Potlach Oil & Gas Co.'s No. 3 fee, NW NE SE Seciton 21-34-1w, had 860,000 feet of gas in the Sunburst at 1,160-1,202 feet and is drilling at 1,270 feet. C. C. Operating Co.'s No. 1 Fryberger, SE cor. SW Section 24-35-2w, is rigging up.

Thelan & Johnson's No. 1 Johnson, NW NE NE Section 29-33-2e, Devon district, was completed for 5,000,000 feet of gas a day from sands at 795, 885-895 feet

(Continued on Page 94)

ALLEGHENY STEEL PIPE

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TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Analysis of Oil for Nitrogen by the Kjeldahl Method

What is the Gunning modification of the Kjeldahl method for the determination of nitrogen in petroleum and its products? What types of nitrogen compounds might occur in petroleum? What is the significance of the presence of nitrogen compounds in Mid-Continent petroleums?—E. C. H.

The Kjeldahl method for the determination of nitrogen was first described about 1883 and has since been modified in several respects. Wilforth in 1885 proposed the use of mercury as an oxygen carrier and Gunning in 1889 suggested the use of potassium sulphate for raising the boiling point of the acid.

The Kjeldahl method is fully described in the text books on Quantitative Analysis, Fertilizer Analysis, Food Analysis, etc. The principle upon which the method is based is that the nitrogen of an organic compound is converted to ammonium sulphate by digestion in sulphuric acid, then the ammonia, released by the action of strong alkali, is distilled into a standardized acid solution. The method may be outlined as follows:

One to two grams of the sample is weighed into a 600 c.c. Kjeldahl flask. Add 20 c.c. pure concentrated sulphuric acid and 3 drops of mercury, then the flask is heated over a low flame until frothing ceases. Bring to a boil, cool somewhat and add 10 grams potassium (or sodium) sulphate. Set in a special hood and boil for one and one-half to three hours after the liquid has become colorless.

The flask is cooled, 150 c.c. distilled water added (continuously), then 20 c.c. potassium sulphide solution, 40 gm./l., (or same quantity of sodium thiosulphate sol. 80 gm./l.), and thoroughly mix to precipitate the mercury. Add slowly, without mixing, 60 c.c. cold sodium hydroxide solution (42° Be.), and a few grams of granulated zinc and a small piece of paraffin (one-four inch size). Connect the flask with the condenser which is dipping into a measured quantity of the standard acid. Mix the contents and distill about 200 c.c. Titrate the excess acid with N/10 alkali in the presence of methyl orange or cochineal.

Very little is known concerning the nature of the nitrogen compounds in petroleum. The early investigators, Mabery (Proc. Amer. Acad. 31, 20, 1894) and Pickham (Amer. J. Sc. 48, 254, 1894) reported larger quantities of nitrogen, 2.25 per cent, than have been found by more recent investigators, who find that the quantity in crude oil is usually below 1 per cent. Nitrogen in the form of basic compounds has been indicated, Mabery and Hudson (Amer. Jr. Sc., 1894, 250) who extracted from California oil compounds ranging from $C_{12}H_{17}N$ to $C_{17}H_{23}N_7$, probably pyridine and quinoline derivatives. Similar substances have been reported by others to be present in many petroleums. Probably ammonium salts of the naphthenic acids are present in some oils. Ammonium salts are sometimes found in the deep wells in oil formations. Ammonia is evolved when some oils are heated to high temperatures.

The presence of nitrogen in a petroleum is of no special significance. It is one of the facts considered favorable to the theory that petroleum has been formed from animal substances.

Retarding Action of Inhibitors in Hydrochloric Acid

Is it a fact recognized by chemists and metallurgists that the action of hydrochloric acid on metals is considerably reduced when an inhibitor is added to the acid? What substances are used for this kind of inhibitor?—R. S. B.

A recent publication of the U. S. Bureau of Mines, R.I. 3249, Chemical Method for Removing Mud Sheaths in Oil Wells, by H. C. Miller and G. B. Shea, contains a discussion of the use of hydrocloric acid in wells, including results of experiments to show the loss of weight of metal when treated with raw and inhibited acids. The material quoted is from this circular.

Inhibitors materially retard the action of hydrochloric acid on metal surfaces. A series of tests was made by the writers to determine the loss in weight of metal when coupons of lapweld, grade C, and grade D, A.P.I. casing were submerged for four hours in a 15 per cent solution of raw hydrochloric acid at a temperature of 110° F. and in a commercial inhibited solution of the same concentration and temperature. The results given in the table expressed in terms of loss of weight of metal, show the effectiveness of an inhibitor in retarding the action of hydrochloric acid on oil well casings. The efficiency of the inhibiting agent, based upon loss of weight of metal, also is given.

INHIBITOR RETARDS ACID ACTION

Grade of casing	Type acid solution	Loss of weight of metal in 4 hours: Per cent	Lbs. per sq. ft.
Lapweld	Raw	1.205	.056
C	Raw	1.030	.047
D	Raw	.780	.041
Lapweld	Inhibited	.023	.0011
C	Inhibited	.033	.0015
C	Inhibited	.025	.0013

The efficiency of the inhibitor, based on the loss of weight of the metal, is represented by the following percentages: Lapweld, 98.04; C grade, 96.81; D grade, 96.83.

Some inhibiting agents commonly used are as follows: Arsenic compounds soluble in acid solutions, examples of which are arsenic acid, arsenic trioxide, or a soluble arsenate or arsenite, such as the corresponding alkali metal salts. Other inhibitors which may be used are cyanides, organic nitrogen bases such as aniline, phenyl-hydrazine, pyridine, quinoline, acidine and derivatives thereof, organic sulphur compounds, such as mercaptans, as well as various by-products of industrial processes, such as ludge acid from oil-refining and residue from acid sulphite paper manufacture.

Chemicals Used in Petroleum Refining—Phenol

This brief description of phenol is one of a series of short articles about the chemicals used in petroleum refining. The first was published March 15, 1934.—Editor.

Phenol is an organic compound having the composition represented by the formula C_6H_5OH, and is commonly called carbolic acid. The chief source, like many of the organic compounds, is coal, the liquid product obtained as coal tar being the raw material.

The tar is distilled and from the fractions obtained the base materials, which mean so much to organic chemistry, are manufactured. The fraction distilling between 392° F. and 518° F. contains the phenols, naphthaline, anthracene and oils. This distillate is treated at about 155° F. with caustic soda solution to dissolve the phenol. After the liquid wash is drawn off the residue is cooled. Naphthalene and other substances crystallize from this liquid. The alkaline phenol extract, or sodium phenolate, is boiled with steam and air and then dissolved in water. Next carbon dioxide is passed through the solution to convert the soda to soda carbonate and thus free the phenol. This is treated with sulphuric acid to yield a solution containing about 25 per cent phenol in water and tar. Final distillation of this yields the pure product. Each stage of the process outlined may be repeated a number of times.

Phenol is an important chemical in the arts, being extensively used in the manufacture of dyes, drugs, perfumes, explosives and many organic chemicals. Its important use in petroleum refining is as a selective solvent when making high grade lubricating oils. Phenol is a crystalline substance, the crystals are usually clear, which when heated form a clear colorless liquid. When a small quantity of water, about 6 per cent, is added to the hot liquid it will remain liquid on cooling. It cauterizes the skin and it is a powerful poison. An alcohol wash, if immediately applied after phenol has accidentally reached the skin, will neutralize the action.

Properties—Formula, C_6H_5OH; colorless crystals when pure; specific gravity, 1.06 to 1.072; melting point, 105° F.; boiling point, 361° F.; specific heat, 0.56 B.t.u. per pound. Easily soluble in alcohol, ether, chloroform, glycerine, fixed oils, volatile oils and petroleum. Slightly soluble in cold water but easily soluble in warm water.

Price and shipping—Special freight classification as shipped in tank cars and drums of 55 gallons, 475 pounds capacity. Price at shipping point about 14 cents a pound. The weight per gallon is 8.8 pounds.

Cloudy Gasoline Frequently Due to Excess Sulphur

I would be pleased if you will tell us what causes gasoline to turn cloudy or misty in a gasoline pump bowl when it is exposed to the sun? A deposit forms on the glass. The gasoline is straight-run from East Texas crude that has been doctor treated in a continuous treater. —W. J. D.

The crude oil produced in the East Texas Field is of low sulphur content, about 0.24 per cent, so there is very little sulphur in the gasoline obtained by direct distillation. When sweetening with the doctor method it is necessary to observe more than ordinary care to prevent the product from having an excess of sulphur. The usual gasoline will dissolve about 0.4 per cent sulphur, some exceptional gasolines will dissolve more; that is, the gasoline will be saturated with sulphur at this percentage.

Gasoline as produced from the straight-run still seldom contains free sulphur so any free sulphur that may be found in the gasoline is in most instances the result of the doctor treatment being faulty. Some free sulphur is necessary to convert the lead mercaptides, formed from the mercaptans, to the disulphides, and if this sulphur is not in excess it will be removed as lead sulphide, sodium sulphide and polysulphide. When a gasoline has not been fully refined, not enough sulphur, there will be a tendency for it to darken and become brownish when exposed to sunlight; if there is an excess of sulphur the milky condition or cloudiness will usually appear on short exposure to the sunlight.

There are a few conditions regarding the use of sulphur in the doctor method that should be considered. Many refiners believe it the better practice to add the small quantity of sulphur usually required after the preliminary wash with the dilute caustic soda solution, before the plumbite solution, because any excess sulphur will then be removed as indicated in the above paragraph. When the sulphur is added after the plumbite has acted there is a tendency to add too much. Of the two forms of sulphur available, the flowers of sulphur and the brimstone or roll sulphur, the latter is to be preferred. The brimstone is more soluble in gasoline and suitable to be packed in a drum or small tower through which a small stream of the gasoline is diverted to become saturated with sulphur as it passes upward through the brimstone and is then combined with the main stream of gasoline before it enters the plumbite section of the treater. This system permits a control of the sulphur by volume instead of by weight.

The sulphur content is usually controlled by means of the copper strip test and the analytical method for total sulphur. The sun test in a four-ounce bottle, showing the brown color or milky cloud, is also used as a guide to shortage or excess of sulphur.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Devised Apparatus of His Own to Remove Paraffin From Well

Having just read the article in your December 22 issue dealing with the problem of paraffin in oil wells, I wish to relate, for the benefit of others, my experience concerning this problem.

I have a small oil well in West Virginia which has flowed its production by heads since September, 1931. After flowing awhile it will frequently clog up with paraffin and cease flowing. After trying in vain to obtain information as to how to clean the paraffin from the tubing or face of sand, I devised the following apparatus which has successfully met the problem:

I made a heater out of 21-foot lengths of 1-inch pipe which was set up edgewise near the well. Having some gas wells near the oil well, a line was run from the gas well to the heater. The line was then connected to one end of the heater and another line from the other end of the heater to the tubing in the oil well. A perforated pipe branching off from the gas line was run just beneath the heater. A control valve or stop was attached to the gas line before being connected to the heater and also a stop on the gas line at the well. The gas after being turned into the perforated pipe, which had a cap at the end of it, was lighted. When the heater became red hot the stop at the well, connected to the tubing, was opened. The gas was then turned into the heater and allowed to flow into the tubing of the oil well for a period of two hours. When the flow line from the well to the tank was opened, the well immediately began to flow. Since which time when the well begins to slow down below its normal production, hot gas is once more run through the heater into the tubing as above described. The well immediately regains its normal production.

I believe that where gas is not available compressed air run through a heater in like manner would produce the same effect upon the well. After the hot gas has been run through the heater to the well the oil flows out hot, which is convincing proof to me that the hot gas melts the paraffin from the face of sand. —Frank H. Yates.

Methods of Drilling Have Seen Improvement in California

The question of whether deep-zone exploration and problems peculiar to West Coast oil operations have brought about any marked progress in the technique of drilling California wells is of interest to a group here composed mainly of young petroleum engineering students. I have been asked to write to you for information on this subject. The real question in our minds is whether the petroleum engineers have been able to add much or little to the efficiency of drilling in a particularly interesting area.—E.P.R.

It may be said without hesitation that the petroleum engineers of California have met the problems arising in their field in an admirable manner. Many distinct improvements in drilling technique have been recorded. Equipment manufacturers have done much in bringing about more efficient methods of drilling. As a general reply to your question this department probably can do no better than quote the following from a paper by V. H. Wilhelm and Harold W. Miller, engineers for the Texas Co., delivered before the New York meeting of the American Petroleum Institute in February, 1934, and referring to developments in California:

"During the past year drilling methods and equipment have advanced a considerable degree. The most noteworthy development has been the use of directed drilling practices, which has attracted a great amount of interest. There has been a considerable improvement in the art of preventing drift and also causing drift of drill holes.

"The practice of running single-shot surveying instruments during the drilling of wells, to determine both the inclination and direction of drift, has become general. This is especially true in town lot fields and those where the productivity of the sand shows considerable lateral variation. For wide drift, the rotary table is usually tilted and the kelly inclined on spudding. Variations in direction or inclination in the hole are brought about through the use of whipstocks, usually of the removable type, also by controlling the flexing of the drill pipe and by choice of bits and the use of reamers. Holding the course of the hole is accomplished by using long, heavy, stiff collars centered by reamers and by controlling the weight on the bit.

"Experiments in drilling point to the desirability of light drilling weights and considerably increased rotating speed. Gauges indicating table speed and drill stem torque are available and in use where desired along with the familiar weight indicators and mud-weighing devices.

"Great progress has been made in methods and devices for excluding intermediate water in oil zones. Intermediate waters of low head are being rather successfully excluded by a simple cementing under pressure method through perforations at the entry point. Multiple cement jobs, made by cementing behind blank sections in the perforated string at the time it is run, show great promise.

"Coring has been greatly improved by the use of hard facing on core bits. Core heads now hold their gauge so well that it has become practicable to increase the diameter of the core head and barrel. Cutting a thinner annular space has resulted in faster coring and the increased size of the core has resulted in improved recovery, which is especially noticeable in the smaller sizes of core heads.

"Formation testers are being more generally used, not only for testing new formations without the necessity of setting casing but also for making water shut-off tests. Many companies have standardized on them for both purposes.

"Electrical coring is becoming more prominent and is proving to be especially valuable in the development of new fields. Resistivity and porosity data determined by this means are valuable supplements to coring data.

"New types of equipment, which have gained considerable usage, include hydromatic brakes on drawworks, vertical steam drilling engine, gun perforator for perforating casing in the hole by discharging a series of electrically detonated shells, using hardened steel bullets and an electric device for detecting point of entry of water in a flowing well without killing the well. Portable, gas engine-driven drilling machines with 125 to 150 horsepower engines, are being adopted for use in repairing wells, cleaning out and for short redrilling jobs, where depth is not too great."

Why Was It Called That?

LIGHTNING

Lightning, which has caused heavy fire losses in the oil field, was originally called lightening, from "lighten," to flash. It used to be said with conviction that lightning never strikes the same place twice. During a recent electrical storm in Pittsfield, Mass., General Electric Co. engineers pointed a camera toward an area in the sky where flashes were especially active, started the motor which whirled the film past the lenses and removed the lens cap. A few minutes later the cap was replaced. When their negative was developed the film revealed 10 separate strokes to the ground, and one of these strokes was a multiple flash of 10 recurrent discharges over the same path.

Wants Meaning of Terms Used in Reports on Oil-Field Water

I have frequently seen the expressions primary salinity, secondary salinity, primary alkalinity and secondary alkalinity used in reports concerning oil field waters and would like some simple explanation of the meaning of these terms.—S. E. N.

R. Van A. Mills, in Bulletin 233, "Protection of Oil and Gas Field Equipment Against Corrosion," issued by the U. S. Bureau of Mines in 1925 gives a brief explanation of the chemical qualities of waters following the system of classification outlined by Chase Palmer, in "The Geochemical Interpretation of Water Analysis," U. S. Geological Survey, Bulletin 479, 1911. Mr. Mills says:

"Primary salinity is the property imparted to a water by alkali (sodium and potassium) salts of the strong (hydrochloric and sulphuric) acids. In oil and gas well waters the primary salinity is usually due entirely to sodium chloride (common salt) though some times it is partly due to sodium sulphate.

"Secondary salinity is the property imparted to a water by the alkali-earth (calcium and magnesium) salts of the strong acids. In oil and gas well waters the secondary salinity is usually due to calcium chloride and magnesium chloride, though some waters contain sulphates of calcium and magnesium. Secondary salinity is sometimes called permanent hardness.

"Primary alkalinity is the property imparted to a water by alkali salts of the weak acids. In oil and gas well waters primary alkalinity is usually due to sodium carbonate and bicarbonate.

"Secondary alkalinity is the property imparted to a water by the alkali-earth salts of the weak acids. In oil and gas well waters secondary alkalinity is usually due to calcium and magnesium carbonates and bicarbonates. Secondary alkalinity is sometimes called temporary hardness.

"Hardness is the quality that makes a water require an excessive amount of soap to form a lather. This quality is imparted by calcium and magnesium, in parts per million, expressed in terms of calcium carbonate. Total hardness is equivalent to secondary salinity plus secondary alkalinity.

"For convenience the various properties of reaction are expressed in percentage of the total reacting properties of the waters. For details of the method of making calculations Mr. Mills suggests reference to the work of Chase Palmer cited above."

Siliceous Lime Is the Productive Zone in Ochs Pool, Kansas

Is the pay in the Ochs Pool, Russell County, Kansas, the Oswald lime or the Siliceous lime? Please tell me the relative positions of these two strata. What is the average estimated ultimate production per acre?—H.R.H.

The production in the Ochs Pool, Russell County, Kansas, comes from the Siliceous lime. The distance between the top of the Siliceous lime and the top of the Lansing-Kansas City formation, of which the Oswald lime is a member, is about 350 feet in the Ochs Pool. The Lansing-Kansas City formation does not contain oil or gas in commercial quantities in the Ochs Pool. This department cannot hazard a guess as to the ultimate recovery from the Siliceous lime.

NATURAL GAS DEVELOPMENTS

W. C. Beckjord Elected Manager of Columbia Gas

NEW YORK, Sept. 17.—Walter C. Beckjord has been elected to the lately created position of vice president and general manager of the Columbia Gas & Electric Corp. Mr. Beckjord, who will probably be in charge of the natural gas business of the Columbia system, has spent more than 20 years in the service of gas companies in the Koppers-Mellon group.

Four additional directors were elected: Mr. Beckjord, Edward Reynolds, Jr., the executive vice president; C. I. Weaver, a vice president, and Frank M. Tait, president of the Dayton Power & Light Co. The elections added three directors to the board, which now consist of 21 members, and filled the vacancy caused by the resignation several months ago of Charles A. Munroe of the W. A. Harriman Securities Corp., Chicago. George W. Crawford is chairman of the board and Phillip G. Gossler is president of the Columbia corporation.

The election of Mr. Beckjord is expected to mark the initiation of a more aggressive gas sales policy in the Columbia system, which is the largest natural gas organization in the country, with 30,000 miles of pipe lines and annual sales of 100,000,000,000 feet of gas.

Mr. Beckjord, who is in his late forties, was graduated from the University of Minnesota in 1909, from which time he served with several gas companies until 1912, when he joined the American Light & Traction Co., becoming vice president and engineer in 1922. In 1929 he was appointed vice president and general manager of the Boston Consolidated Gas Co., a position which he held until his election by the Columbia company.

TULSA FRANCHISE POLICY

Deadline for formulation of a Tulsa city gas franchise policy, being worked out by a committee chosen from the mayor's advisory cabinet, has been advanced from September 15 to Otober 1, Mayor T. A. Penney said.

Harry Campbell, heading the committee, has been called from the city until that time. Charles W. Grimes, Tulsa oil man and committee member, is drawing up a model franchise, from those obtained from other cities in this part of the country.

The franchise election is scheduled along with the general election, November 6.

CANADIAN GAS PRODUCTION

OTTAWA, Canada, Sept. 15.—Figures of the Dominion Bureau of Statistics show that the natural gas production of all Canadian fields in June reached 1,142,526,000 feet, compared with 1,442,521,000 in May and 1,127,681,000 in June, 1933. The total for the six months of 1934 was 13,020,463,000 feet, compared with 13,288,312,000 in the 1933 period.

Imports of mixed (natural and artificial) gas into Canada in June amounted to 5,962,000 feet valued at $4,024, compared with 8,923,000 feet valued at $5,794 in May.

BOTHWELL GAS RATES

BOTHWELL, Ontario, Sept. 15.—Negotiations are in progress between the town of Bothwell and the Union Gas Co. of Chatham for a lower gas rate schedule. The company is also asking for a franchise from the town.

Eight Completions Were Reported in the New York-Pennsylvania Districts

WELLSBORO, Pa., Sept. 17.—Eight completions were reported for the week ending September 14, in the Oriskany sand areas of Pennsylvania and the shallow operations of New York. The four Pennsylvania completions were in Potter County, while those in New York were in Seneca and Ontario Counties. The feature of the week's operations was the bringing in of F. Estes' No. 2, Hebron Township, by Bayliss company for an estimated 22,500,000 feet per day. The top of the Oriskany was reached at 5,178 feet and the total depth was 5,186 feet. S. J. Booth's No. 3, another Hebron operation, came in for 500,000 feet. The Hungiville Development Co. completed this well at 5,228 feet. Potter Development Co. completed a 9,828,000-foot well at a depth of 5,269 feet in Hebron Township. In Genesee Township, H. Barker and others temporarily abandoned their U. B. Russell at 2,000 feet.

In New York the Lynn Gladding well, Bristol Township, Ontario County, was completed at 2,900 feet by Great Northern, for 425,000 feet a day. In Seneca County, the Paul Boa well, Seneca Falls Township, was temporarily abandoned at 800 feet by Robert Speyer Co. Geneva Gas Co. temporarily abandoned its Evans well in Tyre Township, same county, at 1,000 feet. The H. Deboir well in Junius Township, Ontario County, was completed dry and abandoned at 1,020 feet by A. B. Button and others.

Report of operations for the week ending September 14, follows:

PENNSYLVANIA

Wells Completed

U. B. Russell, Genesee Township, Potter County, H. Barker and others, depth 2,000 feet, temporarily abandoned. Doctor Cummings, Hebron, Potter, Potter Development, total depth 5,269 feet, initial production 9,828,000 feet. S. J. Booth No. 3, Hebron, Potter, Hungiville Development, total depth 5,228 feet, initial production 9,500,000 feet. F. Estes No. 2, Hebron, Potter, Bayliss, total depth 5,186 feet, top sand 5,178 feet, initial production 22,500,000 feet.

Wells Drilling

Presbyterian Church, Farmington Township, Tioga County, Mutual Natural, shut down. S. Gooch No. 2, Allegany, Potter, Hanley & Bird, drilling 5,320 feet. Clair Doty, Hector, Potter, P. P. & L., fishing 5,269 feet. George Carroll, Oswayo, Potter, Cunningham Natural, drilling 3,195 feet. E. Estes No. 1, Genesee, Potter, Bayliss, drilling 4,730 feet. M. Wilsey No. 2, Hebron, Potter, United Production, drilling 4,550 feet. J. W. Wells, Allegany, Potter, Stocum and others, drilling 690 feet. Katherine Currier, Allegany, Potter, Electric Geometer, drilling 610 feet. Chloe Kenyon, Hebron, Potter, P. P. & L., rigging up. Burt & Lyman, Hebron, Potter, Penn United Gas, moving in. W. B. Hemphill, Hebron, Potter, Lycoming, location. W. White, Hebron, Potter, Lycoming, brown shale. O. W. Greenman, Hebron, Potter, Lycoming, rigging up. R. and G. Carmer, Hebron, Potter, Lycoming, location. Penn Stave No. 2, Hebron, Potter, Potter Development, location. B. L. Langworthy, Hebron, Potter, Potter Development, brown shale. Emporium Bank No. 1, Shippon, Cameron, Tioga Natural Gas, shut down 4,685 feet. Emporium Bank No. 2, Shippon, Cameron, Tioga Natural Gas, shut down 4,470 feet. C. Campbell, Ridgebury, Bradford, Columbia Carbon, shut down 2,800 feet. W. F. Burroughs, Gaines, Tioga, E. Cabot, location. John Stiles, Clymer, Tioga, E. Cabot, location.

New Locations

John Higley No. 2, Hebron Township, Potter County, Sylvania, location.

NEW YORK STATE

Wells Completed

Paul Boa, Seneca Falls Township, Seneca County, Robert Speyer, temporarily abandoned 800 feet. Evans, Tyro, Seneca, Geneva Gas, temporarily abandoned 1,000 feet. Lynn Gladding, Bristol, Ontario, Great Northern, total depth 2,900 feet. H. Deboir, Junius, Ontario, A. B. Button and others, total depth 1,020 feet, dry and abandoned.

Wells Drilling

Robert Clark, Independence Township, Allegany County, B. Q. D. Co., drilling 4,780 feet. John Gregg, Bristol, Ontario, Homestead Oil & Gas, shut down 1,800 feet. N. Oaks, Phelps, Ontario, Geneva Gas, drilling 928 feet. Stewart Nurseries, Phelps, Ontario, Geneva Gas, fishing 950 feet. Rice Brothers, Geneva, Ontario, Geneva Gas, drilling 670 feet. Pryor, Junius, Ontario, Geneva Gas, drilling 150 feet. Ethel Arnold, Galen, Wayne, Trumbull, shut down 1,550 feet. Costom, Greenwood, Steuben, B. Q. D. Co., drilling 2,825 feet. Torrence-O'Horrigan, Greenwood, Steuben, Wittmer Oil & Gas, drilling 1,700 feet.

New Locations

Cato Bank, Conquest Township, Cayuga County, Hadley & Rogers, moving in. Frank Whelan, Rading, Schuyler, B. Q. D. Co., brown shale.

LANSING GAS PROJECT

MUSKEGON, Mich., Sept. 17.—Proposal for the Lansing, Mich., city council to enter into negotiations with the Federal Government for a loan to finance a natural gas distributing system in the capital city was approved by a large majority in a special vote taken last week at the fall primary election.

While the vote was unofficial in nature it was taken to determine the sentiment for a municipal natural gas system as a guide to the city council.

LETHBRIDGE GAS INSPECTION

LETHBRIDGE, Alberta, Sept. 15.—The Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary is conducting an inspection of appliances and services in Lethbridge. Following the check-up, written recommendations will be furnished consumers. The inspection is undertaken voluntarily by the company for the purpose of ensuring more satisfactory gas service to its patrons.

KANSAS CITY INVENTORY

Employes of the Kansas City Gas Co. will make an inventory for rate-making purposes through a proposal made by the Missouri Public Service Commission and accepted by the company. The commissioners suggested the company make the inventory with its own employes, and that all the work be checked by engineers employed by the commission. It is expected this arrangement will permit the fixing of a proper valuation within six months.

Montana Gas Producers Lose Minneapolis Plan

Montana gas producers who had hoped to supply the Twin Cities were disappointed when the city council of Minneapolis accepted the use of Texas gas to be mixed in limited quantities with artificial gas, giving consumers a rate reduction of 7.35 per cent. The ordinance will remain in effect 10 years.

The line of the Northern Natural Gas Co. from the Panhandle will be extended into Minneapolis at a cost of $600,000, and the new fuel will be available to consumers of the Minneapolis Gas Light Co. about January 1.

This arrangement followed a one-year fight over gas rates in which the council had demanded a rate cut of 19.4 per cent and its ordinance was quashed by Federal court order. Not only that, the council surrendered its right to adjust gas rates every three years, but the ordinance provides the company can not earn more than $1,250,000 net revenue a year.

The new gas rate is 72 cents per thousand. The gas has a content of 800 B.t.u. as against 1,100 in Montana natural gas. Montana gas men are of opinion the doors of Minneapolis are closed to cheap natural gas for 10 years.

TEST WESTERN TIOGA

WELLSBORO, Pa., Sept. 15.—New drilling in the western end of Tioga County by the Thomas Cabot Co., Inc., of Boston, Mass., will begin soon following the moving in of a rig on the John Stiles farm, 3 miles south of Sabinsville, Pa., and 1 mile east of Lansing, Pa., northeast of Gaines, Pa. Building of the rig has already started.

The Cabot company is understood to have under lease 8,000 acres. The company is also contemplating drilling a second well near the Gurnee Coal Co. Drift No. 1 and is expected to move in a rig soon for this purpose.

SKIATOOK RATES REVISED

Revisions for gas rates charged by the Natural Gas Service Co. in Skiatook, Okla., have been authorized by the State Corporation Commission, the new rates operating on a sliding scale ranging from $1 to 20 cents per thousand feet. Consumers formerly paid a flat 55 cents per thousand.

The new rate, according to Paul Reed, commission auditor, calls for $1 for the first 1,000; 55 cents for the next 4,000; 50 cents for the next 5,000; 40 cents for the next 10,000; 30 cents for the next 25,000, and 20 cents for all over that amount. A 10 per cent discount is allowed for prompt payment.

TEXAS RATE HEARING

AUSTIN, Tex., Sept. 17.—The Texas Railroad Commission has called a hearing in Fort Worth September 24 to obtain testimony precedent to fixing a city gas rate for gas in towns and cities served by the Public Service Corp. of Texas.

The order calling the hearing stated that many towns served by the company desired to pass rate reducing ordinances, but were unable to establish a fair burner tip rate until a city gate rate had been established.

LINDSBORG MUNICIPAL PLANT

LINDSBORG, Kans., Sept. 17.—Preparations to construct a municipal gas distributing system are going forward here after a $55,000 bond issue for the purpose was approved 4 to 1.

PERSONAL PARAGRAPHS

W. K. KIRBY, consulting petroleum engineer, has moved from New York City to Houston, Tex.

* * *

P. G. BUERK of New York has arrived in Los Angeles Harbor from the eastern metropolis on board the S.S. Virginia.

* * *

J. A. HOEKSTRA, with De Bataafsche Petroleum Maatschappij, Royal Dutch-Shell subsidiary, is returning to his headquarters at Batavia, D.E.I.

* * *

C. E. WHITNEY, general sales manager of Baker Oil Tools, Inc., Los Angeles, Calif., has been in Texas visiting company offices and representatives.

* * *

MERCER H. PARKS, formerly division engineer for the Carter Oil Company at Duncan, Okla., is now with the Humble Oil & Refining Company at Houston, Tex.

* * *

FRED A. ELVES of Calgary, Alberta, actively interested in a number of rceent tests in the Turner Valley Field, has been elected president of the Calgary Stock Exchange.

* * *

C. E. WRIGHT, chief petroleum engineer, Indian Territory Illuminating Oil Company, Oklahoma City, is putting mileage on his new automobile while on a vacation trip in the East.

* * *

JACK T. FRENCH, for several years advertising manager of the Richfield Oil Company, recently resigned to take up executive and contract work with the H. C. Bernsten Advertising Agency.

* * *

GROVER CROSBIE, wife and family are spending three months in Petrolia, Ontario, on furlough. Mr. Crosbie is production superintendent of the International Petroleum Company at Negritos, Peru.

* * *

DR. R. E. WILSON, vice president of the Standard Oil Company of Indiana, Chicago, was in New York last week.

* * *

E. A. WYMAN, of the Amerada Petroleum Corporation, of Tulsa, was a recent visitor in Central Michigan fields.

* * *

B. M. NOWERY, general production superintendent of the United Gas System, Houston, Tex., is in California for a vacation of several weeks.

* * *

CASPER A. RUF, vice president, Parkersburg Rig & Reel Company, Parkersburg, W. Va., was a Tulsa visitor last week.

* * *

JOHN H. TUCKER, superintendent of production, Gulf Production Company, Houston, Tex., has returned from a vacation trip in Colorado.

* * *

EARL ANDREWS and RUSSELL DONHAUR have returned to Central Michigan fields after spending a week visiting relatives and friends in Logan and Lancaster, Ohio.

* * *

GEORGE C. FRANCISCO, JR., district manager of the Sun Oil Company, Houston, Tex., is on a two-weeks vacation being spent at various points along the Gulf Coast.

* * *

R. J. McDERMID, wife and daughter, left recently via New York on the "'Santa Maria" for Talara, Peru, after a furlough of several months spent at Petrolia and other Canadian points.

WILLIAM A. DAOUST, of the state geological staff in Mount Pleasant, Mich., has returned after a vacation trip to his former home in Alpena, Mich.

* * *

HERBERT F. BEARDMORE, petroleum engineer, Indian Territory Illuminating Oil Company, Oklahoma City, has returned from an interesting vacation trip.

* * *

DAVID WRIGHT is spending a month at Sarnia, Ontario, after drilling a test for Toronto interests on the north shore of the St. Lawrence east of Montreal.

* * *

GEORGE R. BENNETT has been advanced to service engineer in the West Texas district for Hughes Tool Company, covering New Mexico and West Texas.

* * *

MISS ELSIE ROBEY, of Oblong, Ill., has returned to her home after spending a vacation with her father, B. B. ROBEY, in Porter Township, Midland County, Michigan.

* * *

FRED H. WILCOX, formerly connected with Pennsylvania Power & Light Company, is now associated with Magnolia Petroleum Company as district geologist in Midland, Tex.

* * *

MORRIS YABROVE, accompanied by his two sons, HOMER and EDWARD, who have been visiting him in Mount Pleasant, Mich., for about two weeks, and HARRY KURCHICK, are in Lancaster, Ohio, for a few days.

* * *

E. H. SALRIN, vice president, H. LEYENDECKER, chief scout, and A. I. LEVORSEN, chief geologist, all with the Tide Water Oil Company, Houston, Tex., have completed an airplane trip over West Texas and New Mexico.

K. A. COVELL, engineer, Pure Oil Company, Chicago, has been in Tulsa on company business.

* * *

EVAN JUST, formerly with the New Mexico School of Mines, is now petroleum engineer with the Carter Oil Company, Oklahoma City.

* * *

SHERWOOD BUCKSTAFF, geologist for the Shell Petroleum Corporation has been transferred from Oklahoma City to the Tulsa office.

* * *

WALTER ROUTT, representative for Baker Oil Tools, Inc., has been in Baylor Hospital, Dallas, Tex., after being seriously injured in an automobile accident in that city.

* * *

H. L. DONHISER, district superintendent of the Pure Oil Company in Greendale Township, Midland County, Michigan, and his family have been visiting the Chicago fair.

* * *

C. L. STAHLER is being moved to Odessa, Tex., to be in charge of the new warehouse the Frick-Reid Supply Corporation is erecting at that place. A. L. HENDERSON is also being transferred by the company.

* * *

JACK BLISS and MISS RUTH EUGENIA HARNS, former students at the University of Colorado, were married recently in Dallas, Tex. Mr. Bliss is employed by the Geophysical Research Company, with headquarters at Shawnee, Okla.

* * *

BASIL R. JACKSON, who has been acting as American representative of the Anglo-Persian Oil Company in New York, is accompanying SIR JOHN CADMAN, chairman of the board of that company, on a trip to Australia. Mr. Jackson is not expected back in New York until next spring.

* * *

BEN HECK, producer of Spencer, W. Va., is reported recovering from a severe attack of tonsilitis.

* * *

J. F. HOSTERMAN, district geologist for the Amerada Petroleum Corporation, has been transferred from San Angelo to Fort Worth, Tex.

* * *

DICK WILLIS, head of the land department, Magnolia Petroleum Company, Houston, Tex., is spending a vacation in Philadelphia, Pa.

* * *

JOHN B. BEST, geologist with Mills Bennett Production Company, Houston, Tex., has been transferred temporarily to Laredo, Tex.

* * *

S. P. BROWN, vice president and sales manager of the Hughes Tool Company, is spending several weeks in Colorado.

* * *

EDWARD SHIELDS, of Mount Pleasant, Mich., was expected to return this week from a short visit to his home in Butler, Pa.

* * *

CARL B. KING, drilling contractor, who has been spending much of his time on the Gulf Coast the past year, is in Ada, Okla., where he is looking after a rig which he is running there.

* * *

CHARLES D. HOFFMAN, formerly of Marietta, Ohio, but now field superintendent for the Reed Oil Company, Muskegon, Mich., returned to Muskegon after taking his son, Byron, to the Mayo Brothers clinic in Rochester, Minn.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

September 20, 1909

Charles N. Taylor of Greymouth, New Zealand, is learning about the oil business in Oklahoma preparatory to starting exploratory work in his own country for the Consolidated Goldfields, Ltd.

Pennsylvania grade oil sells for $1.58 per bbl.; Mid-Continent crude of 30 degrees and upward sells for 38 cents.

The Coalinga Field is the largest current producer in California. It produces 44,000 bbls. per day. Kern River is second with 37,000 bbls.

20 Years Ago

September 17, 1914

Nelson K. Moody, vice president and assistant general manager of the Prairie Oil & Gas Co., has recovered from an injury to his leg received in a golf game in Independence, Kans. He was incapacitated for several months.

Mrs. Herbert R. Straight and children, who were in Germany when the war started, have arrived in Bartlesville, Okla., their home, after an exciting experience in getting out of the war zone.

The Standard Oil Co. tanker "Lamps" has arrived in New York harbor with 13 Wellesley college girls picked up in an Italian port. They were touring Europe when the shooting began.

Producers in Cushing Field in Oklahoma have 9,000,000 bbls. of crude oil in storage in that district.

10 Years Ago

September 18, 1924

The Mexican Central Railroad is fighting grasshoppers with crude oil. The 'hoppers became so numerous they stopped trains. Now the right of way is oil soaked and the 'hoppers don't like it.

The Union Natural Gas Corp., Ohio Fuel Supply Co., and Manufacturers Light & Heat Co. have merged and will be known as the Ohio Fuel Corp. George W. Crawford heads the merger.

Motor routes have been completed in Syria, Iraq and Persia and cars may be rented to make the trip for $95. Single seats cost $25.

ROGER DENNISON, division geologist for the Amerada Petroleum Corporation, Fort Worth, has returned from an auto trip with his family to points in Mexico.

* * *

H. A. HEMPHILL, formerly geologist with the University Land office at San Angelo, Tex., has joined the geological staff of the Magnolia Petroleum Company at Midland, Tex.

* * *

CLEVELAND O. MOSS, superintendent gasoline and gas department Deep Rock Oil Corporation, Drumright, Okla., spent his vacation in Colorado, recently returning to his duties.

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JOHN D. ROCKEFELLER, SR., may not be able to make his customary Florida trip this year. Physicans who had advised him to start south earlier than usual, have counseled delay.

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HUGH McCLELLAN, geologist, Wichita, Kans., accompanied by Mrs. McClellan, has been spending some time in Boston and New York. They will return to Wichita by way of Chicago about October 1.

* * *

WILLIAM H. WILSON, eastern manager of the Republic Oil Refining Corporation, New York, won the bowling contest at the annual outing of Oil Trades Association of New York held last week at the Pelham Country Club.

* * *

HAMILTON W. SMITH, assistant secretary of the Pennsylvania Grade Crude Oil Association, Los Angeles, Calif., recently won a cash award made up by local fishermen when he brought in a 40-pound tuna off Coronado Islands.

* * *

FRED VAN COVERN has been re-elected assistant treasurer of the Planning and Co-ordination Committee for the six months period from September 15. JOHN M. CAMERON was elected assistant secretary of the committee for the same period.

* * *

FREDERICK G. CLAPP, consulting geologist, New York, has returned to his office, 50 Church Street, after spending the first eight months of the year in professional studies in several western Asian countries.

* * *

PAUL HADLICK, secretary to the marketing subcommittee of the Planning and Coordination Committee, has returned to Washington after a vacation which took him through the northwest section of the United States and into Canada.

* * *

R. F. BAKER, chief geologist of the Texas Company, accompanied by A. R. WILSON, manager of the producing department for the Rocky Mountain area, and H. A. STEWART, head of the geological department for the district, are making an inspection trip of the properties in this territory.

* * *

JACK MALSEED, a member of the Shell Oil Company's marine department at Los Angeles harbor, turned in a net score of 67 and became the 1934 golf champion of the Bilge Club at the annual golf and tennis tournament. ART PEGG, JR., formerly conceded to be player No. 1 at the University of Santa Clara and one time ranging No. 6 in the Pacific Coast Juniors, took the honors in the singles tennis tournament.

* * *

FRANK BASS, formerly superintendent of the Thompsons district, Fort Bend County, Texas, for Humble Oil & Refining Co., has been transferred to the Houston office, where he has been made assistant to C. W. DELANCEY, assistant superintendent of the Gulf Coast division. T. G. ROACH, assistant superintendent at Conroe, has been transferred to Thompsons to succeed Mr. Bass as superintendent there.

Stepped From College to Bull Gang

Fresh from the Colorado School of Mines, where he had taken the course in mining engineering, C. S. Sanders joined the bull gang of the Midwest Refining Company in Casper, Wyo., where ability to shovel b.s. counted for more than knowledge of Fairbairn's empirical formula. That was in 1917. Before long they put him out in the field with a civil engineering crew. Work in the control laboratory followed. Then he was transferred to the company's gas plant in Salt Creek, Wyo., where his principal duties were pipe fitting and gas testing. In 1918 the young man enlisted in the Forty-fourth Engineers and he had been overseas 11 months when the war ended.

C. S. SANDERS

Rejoining the Midwest, Mr. Sanders in September, 1919, was placed in charge of the yard laborers at the Elk Basin, Wyo., gas plant as "bull gang foreman." The next year he was transferred to the Salt Creek gas plant as pipe fitter foreman and later construction foreman. In 1923 he was made construction superintendent in the electrical department at Salt Creek. Three years later he was advanced to plant superintendent, with supervision of the electrical plant, electrical work in the field and field equipment. Further promotion came in 1930, when he was made assistant general superintendent of the producing department and transferred to Hobbs, N. Mex.

In July 1932, following organization of the Stanolind Oil & Gas Company, Mr. Sanders was made a division superintendent, in charge of producing operations in Texas and New Mexico, with his office in Fort Worth, Tex. In January, 1934, he was promoted to assistant general superintendent and transferred to the Tulsa office.

Mr. Sanders was born in Prairie Grove, Ark., and following graduation from the Prairie Grove high school entered the Colorado School of Mines. He married Miss Grace Blakemore, of Prairie Grove, and they have one daughter. Mr. Sanders' work keeps him busy, but he hunts, fishes and plays golf when he gets a chance.

H. W. SANDERS, who has been associated with the Union Oil Company for several years, has been elected assistant treasurer of the company.

* * *

EDWARD STEIDLE, dean of the School of Mineral Industries, Pennsylvania State College, with his family is on a Mediterranean cruise to Egypt, Palestine and Syria.

* * *

PAUL HUNT of the engintering department of the Texas Company's refinery at Casper, Wyo., has been transferred to the company's plant at Cody, Wyo., which is resuming operations after a shutdown of more than three years.

* * *

L. E. (SKIPPER) LEWIS, formerly field superintendent for Simms Oil Company, and for several years superintendent of Van Field for Pure Oil Company, is now associated with SID RICHARDSON, with temporary headquarters in Monahans, Tex.

* * *

OSCAR SUTRO, vice president of the Standard Oil Company, flew from San Francisco to be on hand at the annual picnic of the Standard Oil Company Employes' Association at Huntington Beach. Approximately 5,000 employes and their families attended the outing with many from the San Joaquin Valley for the annual get-together.

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KRUG DUNBAR, LAURENCE CHASTINE, H. D. HUGHES and MRS. BLANCHE KELLEY, of the California Oil Umpire's staff, who have been located at Bakersfield for more than a year, have been transferred to the Los Angeles office. W. D. WARDNER, W. J. JANS, G. B. DILLEY, LEE RALPH, MISS HELEN HAMILTON and MISS VELMA JARREL remain in the Bakersfield office.

H. R. MILNER, K.C., of Edmonton, Alberta, president of the Canadian Western Natural Gas, Light, Heat & Power Company and Northwestern Utilities, Ltd., has returned from a holiday trip to Ireland.

* * *

U. de B. DALY, formerly of the Shell Petroleum Corporation and now president of the Dapar Oil Company, of Central Michigan, has been named a member of the board of directors of the Oil and Gas Association of Michigan succeeding C. N. SESSIONS of the Reed Oil Company, Muskegon, who recently resigned.

* * *

E. H. FINCH sailed from New York September 8 on the Mauretania for Venezuela to continue supervision of geophysical work for the Venezuelan Petroleum Company, New York, the same interests he has represented in the Gulf Coast region for some time, with headquarters in Houston and San Antonio, Texas.

* * *

GORDON H. MICHLER, formerly vice-president and managing director of L'Economique, oil marketing company in France, has been appointed assistant to Orville Harden, director of the Standard Oil Co. (New Jersey) in charge of South American operations. Mr. Michler will have charge of the Standard's marketing activities in South America, Mexico and the West Indies.

* * *

Robert W. Atha, superintendent of the Michigan division of the Atha Oil Company for the past year, has resigned to devote his entire time to a new leasing, drilling and contracting business recently organized under the name of Robert W. Atha, Inc. He came here from the Mid-Continent fields and is secretary of the Oil and Gas Association of Michigan. FRANK WILKINS, drilling superintendent for the Atha Oil Company and veteran employe of the concern, will be new Michigan superintendent of the oil company.

* * *

W. T. HARDENDORF of Denver, Colo., who for the past two years has been spending considerable time in Montana and making Billings his headquarters, visited Casper, Wyo., recently on business.

* * *

P. R. NAYLOR, superintendent of the Maple Leaf refinery at Coutts, Alberta, in company with ED CASSIDY, superintendent of the Montana Pipe Line Company, recently made a survey, of the Cut Bank Field in northern Montana.

* * *

C. L. HIGHTOWER, safety director for the Texas Pacific Coal and Oil Company, Fort Worth, Tex., and head of the petroleum section of the National Safety Council, has resigned from his position with the company to become safety director for the United Gas Company at Houston, Tex.

* * *

J. C. WRIGHT, president and general manager of the Globe Oil Tools Company, Los Nietos, Calif., will leave New York City October 12 on the SS. Santa Elena for Cristobal, Panama. From there he plans to fly to Trinidad, Venezuela and Colombia, spending a month or six weeks in the South American oil fields before returning to the United States.

* * *

The amateur champion trapshooter of the United States for 1934 is an oil producer. LAWRENCE DANA of Derrick City, Pa., in the Bradford Field, won the Grand American handicap recently. He modestly said he was the most surprised man at the shoot when he defeated a hundred or more of the best amateur clay pigeon crackers in the country. Mr. Dana said he joined the Bradford squad just to fill out the team. Mr. Dana is too modest. When it comes to cracking clay targets he has been able for many years to scatter the pieces all over the place without missing.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Sept. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	41½	2,900	46	41⅝	41¾	Amerada Corp.	774,875	N.P.	50cQ	7-31-34	47⅝	18½	22¾	12	23	11½
35¼	21½	7,400	24½	22⅛	22¼	Atlantic Refining	2,673,834	$25	25cQ	9-15-34	32½	12⅝	21⅞	8⅝	28⅝	8⅝
10	6	9,500	6⅝	6	6⅛	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	7¾	24,800	9	7⅞	7⅞	Columbia Gas & Elec.	11,610,036	N.P.	12½cQ†	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	7¼	18,700	8⅜	7¾	7¾	Consolidated Oil Corp.	14,218,835	N.P.	28c	4- 7-34	15⅝	5	9	4	15⅞	4¼
22¾	15¾	18,900	17⅞	16½	17¼	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	19⅝	4⅞	9⅜	3⅝	12	5
23½	12	2,900	15¾	14¼	14½	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅝
5⅝	2½	1,900	3	2⅝	2⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅝	1⅞	5⅝	1⅜	14⅛	3
3⅜	1¼	200	1¾	1¼	1¼	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	3,000	11⅝	10⅛	10⅝	Mid-Continent Petroleum	1,857,912	N.P.	25c	5-15-34	16	3¾	8⅞	3¾	16⅝	5
21⅛	10	400	12	12	12	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	8,300	10¼	9⅝	9⅝	Ohio Oil Co.	6,563,107	N.P.	15c	9-15-34	17⅝	4⅜	11	5	19½	5⅛
8⅞	5¾	800	6¼	5¾	5¾	Pacific Western Oil	1,000,000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅞
2½	⅝	No sales ..	..	..	..	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅝	1¾	¼	4¼	⅝
20¾	14½	9,800	16	14⅝	14⅝	Phillips Petroleum	4,154,687	N.P.	25c	9-1-34	18⅝	4⅜	8⅛	2	16⅝	4
16¾	8	3,700	9	8⅜	8½	Plymouth Oil Co.	990,261	$5	25cQ	9-29-34	17⅝	6⅜	12½	6	18	6
14⅞	7¼	7,600	7¾	7	7	Pure Oil	3,038,370	N.P.	....	9- 1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39⅛	32¼	700	34½	33⅝	34⅝	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	39¾	17⅝	23¾	12⅛	42⅝	13
38⅜	23¾	3,500	25	21½	21½	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	9-15-34	48⅜	15	20⅜	6⅝	20¾	5½
11½	6½	4,300	7	6½	6¾	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8⅜	2½	10¼	2½
89	57	800	61	60⅛	61	Shell Union Oil pfd.	400,000	$100	....	7- 1-31	61	28½	65¼	18	78	15
11¼	7¼	3,800	10	9⅜	9⅝	Simms Petroleum	461,000	$10	30c	8- 1-34	12⅜	4⅞	7½	3¼	11	3½
11½	6¾	300	7	7	7	Skelly Oil	1,008,514	$25	....	12-15-30	9⅞	3	5¾	2½	12⅞	2
19⅞	12½	31,300	14¼	13	13¼	Socony-Vacuum	31,019,694	$25	15cQ	9-15-34	17	6	12¼	5¼	21	8⅜
42⅞	30⅝	18,300	33¾	30¾	31	Standard Oil of California	13,102,900	N.P.	25c	9-15-34	45	19½	31⅞	15⅛	51⅜	23½
32¾	25	19,600	26¾	25¼	25½	Standard Oil of Indiana	15,941,894	$25	25cQ	9-15-34	34	17	25⅛	13⅛	38½	13½
41	30	500	29	27½	27½	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12¾	16½	7	19	7⅜
50⅛	40⅝	20,000	44	41⅜	41½	Standard Oil of New Jersey	25,740,965	$25	50cSA	6-15-34	47½	22¾	37⅜	19⅞	52½	26
69¾	51½	500	69	68	69	Sun Oil	1,733,013	N.P.	25cQ	9-15-34	59	35	39⅞	24⅜	45¼	26⅜
29⅜	20	9,600	22½	21	21⅛	Texas Corp.	9,486,417	$25	25cQ	10- 1-34	30⅛	10¾	18¼	9¼	36¼	9⅞
6½	2½	2,000	2⅞	2⅝	2¾	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14⅜	8½	8,500	9¾	8¾	8¾	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11¾	3⅛	5⅜	2	9	2⅛
85⅛	64½	500	81	80	80	Tide Water Associated pfd.	666,524	$100	$1.50Q	6-30-34	65¼	23½	60	20	68	20½
20½	13¾	1,800	15¼	14¼	14¼	Union Oil of California	4,386,070	$25	25cQ	8-10-34	23⅝	8½	15⅜	8	26⅝	11
21¼	15⅝	900	19⅜	19	19	Union Tank Car	1,200,000	N.P.	30cQ	9- 1-34	22¾	10½	19¾	11⅝	25⅛	16
5¾	2½	300	3½	3⅛	3⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅜	2⅜

*Ex-dividend. †Payable in 5 per cent convertible preferred stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Sept. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	50	31	31	31	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-34	39¾	25	35	17½	56	30
5½	2¾	3,300	3¼	2⅞	2⅞	Carib Syndicate	579,000	25c	....	.....	7¾	¼	⅝	¼	2⅜	¼
126½	115	No sales ..	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1Q†	9-29-34	129	71	90	53	129½	75
4¼	1⅝	15,300	1⅞	1⅜	1⅞	Cities Service	37,804,394	N.P.	....	6- 1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	1	1,900	1¼	1	1	Colon Oil	2,200,000	N.P.	....	.....	4	¼	1¾	¼	3½	¼
3⅞	1¼	500	1¼	1¼	1¼	Cosden Oil	399,687	$1	....	.....	3⅞	1⅜	2⅞	¼	3⅜	⅝
14⅜	9⅝	6,100	13	12⅜	12⅜	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3½	1¾	3⅞	1⅝
7½	4⅝	300	5¼	5	5	Darby Petroleum	509,696	$5	25c	7-25-34	8	2½	7¼	1⅝	2½	1⅝
2¼	1¼	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	2¾	⅝	3	1	6	1½
37	30	No sales ..	..	..	..	Eureka Pipe Line	50,000	$100	$1Q	8- 1-34	41⅝	20	35	18	36	19
76¾	50	6,000	55¼	51	51	Gulf Oil Corp.	4,538,101	$25	....	10- 1-31	62	24	44¾	23	75½	25⅝
46⅜	33½	5,000	41¾	40	40	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10- 1-34	105½	40	55	35⅝	72	44½
15½	12⅝	4,200	15	14¼	14¾	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	6- 1-34.	15⅞	6½	10⅞	6¼	18¼	7⅝
6⅞	4	No sales ..	..	..	..	Indiana Pipe Line	300,000	$10	15cSA	5-15-34	8	3⅛	7½	2¾	21⅛	5½
30⅝	19⅜	16,000	29⅛	26¾	27⅜	International Petroleum	14,247,088	N.P.	56cSA†‡	6- 1-34	23½	8⅞	12¼	8	15½	7⅜
4	2⅞	4,000	3⅝	3¼	3½	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅛	2½	½	2	½
5⅞	3½	100	3⅞	3⅞	3⅞	Lion Oil Refining	270,000	N.P.	....	10-27-30	9¼	1¼	3½	⅜	6¾	1½
8⅜	4⅝	400	4⅞	4⅝	4⅞	Lone Star Gas	5,382,723	N.P.	16cQ§	8-31-34	11⅞	4¾	11	3⅜	29	5½
5½	4	3,100	4⅝	4¼	4¼	Mountain Producers	1,682,182	$10	15cQ	7- 2-34	6½	2½	4⅜	2½	5⅞	2
18¼	13½	600	14¾	14½	14½	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	20	10	14⅝	8	26½	9⅜
9½	7⅝	200	7¾	7¾	7¾	National Transit	509,000	$12.50	40cSA	6-15-34	10	5½	10½	6	17½	5
2½	1⅜	1,900	2⅛	2	2⅛	New Bradford Oil	1,445,202	$5	10c	9-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	100	1	1	1	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¾	⅜	3	⅜
4¾	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	4⅞	3	9⅜	7½	14½	5⅜
7	4⅝	No sales ..	..	..	..	Northern Pipe Line	120,000	$10	25cSA	7- 2-34	6⅛	4¼	5½	3⅛	35½	20
2⅝	⅞	3,200	1⅜	1½	1½	Pantepec Oil	1,608,700	N.P.	....	.....	3⅜	⅛	⅝	⅛	2	⅝
3⅜	⅞	100	1	1	1	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅝	2⅛	⅝	3	⅝
7⅛	5½	2,900	6	5⅝	5⅝	Salt Creek Producers	1,496,859	$10	20cQ	8- 1-34	9¼	3½	5½	2⅞	7⅝	2⅜
26½	17½	1,900	22½	21	21	South Penn Oil	1,200,000	$25	30cQ	9-29-34	22⅛	11	16½	9⅝	23⅞	9¼
5½	4	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	9- 1-34	6	2¼	10	3⅜	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10- 1-34	43	24½	37	27	42½	25
17⅝	14⅝	2,700	15½	15¼	15¼	Standard Oil of Kentucky	2,606,983	$10	25cQ	9-15-34	19¼	8⅜	15⅞	8⅞	23⅜	12¼
16⅞	9	800	9⅜	9⅛	9¼	Standard Oil of Nebraska	190,822	$25	....	6-20-34	20½	11	19	10¼	36½	16
28½	14	350	16	15	15	Standard Oil of Ohio	753,740	$25	....	1- 3-33	41	15½	30⅛	15½	62½	23
2	⅛	2,500	1⅜	1¼	1¼	Sunray Oil	1,162,840	$5	....	4-15-31	1½	¼	⅝	⅛	5¼	⅜
11	4⅜	500	5⅜	5⅜	5⅜	Texon Oil & Land	936,028	N.P.	15cQ†	9-29-34	13¾	6¼	10½	4½	12⅞	2¼

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Gulf Coast Wildcats

(Continued from Page 69)

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract. Derrick.

Trans-State Oil Co.'s No. 1 Joseph Fojtek, NE cor. of 68.29-acre tract, ½ mile W of new discovery.
Sand 3,754-69 ft.; comp. 220 bbls. on ½-inch choke.

THOMPSON—FORT BEND COUNTY

Gulf Prod. Co.'s No. 5 Mary Gubbels, 300 ft. from E line and 602 ft. S of No. 7 on 128-acre tract in Tract No. 3, Sam Kennedy Sur.
T.D. 5,380 ft.; initial prod. 1,300 bbls. per day, ¾-inch choke.

Gulf Prod. Co.'s No. 5 Hammerstram, 3,315 ft. E along S line of lease from SW cor. and 300 ft. N at right angles, Samuel Kennedy Sur.
Derrick.

Humble-Gulf's No. 29-A Lockwood & Sharp Drlg. 4,122 ft.

Humble-Gulf's No. 30-A Lockwood & Sharp, 4,296 ft. W of E line and 293 ft. S of N line of lease in J. Rabb Sur.
Derrick.

Humble-Gulf's No. 31-A Lockwood & Sharp, 4,170 ft. W of E line and 293 ft. S of N line of lease in J. Rabb Sur.
Derrick.

Humble-Gulf's No. 32-A Lockwood & Sharp 4,391 ft. W of E line and 293 ft. S of N line of lease and 1,149 ft. W of No. 31-A in J. Rabb Sur.
Derrick.

Humble O. & R. Co-Gulf's No. 33-A Lockwood and Sharp, 150 ft. W of E line and 293 ft. S of N line, J. Rabb Sur., Tract No. 2.
Location.

Humble-Gulf's No. 28-D Lockwood & Sharp, 7,175 ft. from W line and 2,980 ft. from N line of survey.
Location.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 3,372 ft. S along W line from NW cor. of James Frazier Sur., and 2,154 ft. at R/A.
Drlg. gumbo 618 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 41 Cade, Fitzsimmons Sur.
Drlg. sand and lime 4,106 ft.

Yount Lee Oil Co.'s No. 40 Cade, 430 ft. NW of No. 2-B, 360 ft. from E line of lease and in line with No. 39 and No. 2-B Fitzsimmons Sur.
Coring sand and shale 5,359 ft.

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 36 and 38 and 150 ft. E at right angles.
Derrick.

Yount Lee Oil Co.'s No. 22 Smith.
Drlg. sand and lime in sidetracked hole 3,807 ft.

Yount Lee Oil Co.'s No. 1 Maco Stewart, Martin Dunman Sur.
Drlg. salt 3,965 ft.

ARRIOLA—HARDIN COUNTY

Republic-Houston's No. 3-X Arriola fee, 2,150.7 ft. S of N line of lease and 150 ft. E of W line of Unit No. X or 400 ft. E of Republic's No. 6 Arriola fee in E. Arriola.
Drlg. rock 2,610 ft.

Republic-Houston Oil Co.'s No. 8 fee.
Reaming 4,700 ft.

SARATOGA—HARDIN COUNTY

Hines Bros.' No. 1 Coswell.
T.D. 3,340 ft.; W.O.C.

Rio Bravo Oil Co.'s No. 2-D Jordit, 200 ft. N of No. 9 Jordit.
Set 6-inch screen; topped sand 1,402 ft.; T.D. 1,419 ft.

SOUR LAKE—HARDIN COUNTY

Humble O. & R. Co.'s No. 1 Kirby et al, 140 ft. E W line and 300 ft. S N line of old Gulf 170-ac. tract, S. Jackson Sur.
Drlg. sand 6,032 ft.

Steinberger Pet. Co.'s No. 1 Weiss, 150 ft. W of Farr No. 1 and 50 ft. out of SE cor. of Blk. 28, H. B. Williams Sur.
Location.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, H.T.&B. Sur., Sec. 69.
Derrick.

GOOSE CREEK—HARRIS COUNTY

Herring's No. 1 Williams, 180 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 80 Simms-Smith Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
Drlg. shale 5,691 ft.

PIERCE JUNCTION—HARRIS COUNTY

Benedum & Trees' No. 1 W. J. Settegast, 3,629 ft. from S line of Sur., and 100 ft. from E line of tract in the J. Kopman Sur.
Bridged at 6,753 ft.; pulling csg. 7,165 ft. to reset.

D. B. Cogswell's No. 1 Herman Hospital, 525 ft. W of NE cor., 300 ft. S of line of lease in J. Kopman Sur. No. A-135.
Drlg. sticky shale 1,476 ft.

Hamill & Smith's No. 1 Bender, B.B.R.&C. Sur., Abst. 179, in Jones 25-ac. subd.
Comp. as gas well 3,037 ft.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 4,510 ft.; standing.

Rio Bravo Oil Corp.'s No. 12-A Settegast, 1,410 ft. N line, 650 ft. E line, J. A. Kopman Sur.
Shale 5,923 ft.; S.D.

MYKAWA—HARRIS COUNTY

Danciger Oil & Ref. Co.'s No. 2 Minnetex, 150 ft. of N line and 85.9 ft. of E line of lease, Lot 253, Wm. Lovett Sur.
Rigging up.

WesLen Prod. Co.'s No. 1 Erin, C of Lot 17, Erin Gardens Subd., F. J. Rothaas Sur.
Drlg. sand and gravel 1,100 ft.

Texas Co.'s No. 4 Wm. Hirsch, 948 ft. N and 466 ft. W of SE cor. of lease.
Spudded.

TOMBALL—HARRIS COUNTY

Amerada Pet. Corp.'s No. 2 Fitz-Rudel, SW cor. of Fitz-Rudel tract in Joseph House Sur.
Drlg. hard sand 4,853 ft.

Amerada-Stanolind's No. 5 Otto-Rudel, 500 ft. E line 50-ac. lease in J. House Sur.
Comp.; no gauge.

Humble Oil & Ref. Co.'s No. 1 Christine Holderreith, 377 ft. from N line and 466 ft. from E line of most northerly NE cor. of 85-acre tract in J. House Sur.
W.O.C. 5,546 ft.

Humble O. & R. Co.'s No. 1 E. B. Johlke, 466 ft. N of S line, 555 ft. E of W line, Joseph House Sur.
Abnd.; T.D. 5,675 ft.

Humble O. & R. Co.'s No. 1 John Holderreith, 500 ft. S line, 495 ft. E and W lines of 112.5-ac. lease, C. W. Pillott Sur. No. 532.
Drlg. shale 966 ft.

Humble Oil & Ref. Co.'s No. 2 J. Holderreith, 466 ft. S of most S line of cemetery and 572 ft. from E line of tract, C. N. Pillot Sur.
Derrick.

Humble-Magnolia Pet. Co.'s No. 2-A Emil Schultz, 550 ft. from N line, 663 ft. from SE line of lease, C. Goodrich Sur.
Location.

Humble Oil & Ref. Co.'s No. 1 M. F. Michel, 466 ft. from N line and 584 ft. from W line of lease, C. N. Pillott Sur.
Location.

Humble-Magnolia Pet. Co.'s No. 1 J. Wright, 318 ft. from SE line, 318 ft. from SW line of lease, 495 ft. N along E line from SE cor. of 33.7-acre lease, J. House Sur.
Location.

Humble-Magnolia's No. 1 Krug, 600 ft. N and 187 ft. E from SW cor. of J. F. W. Kobs. 30.6-ac. tract in J. H. Edwards Sur.
Location.

Humble-Magnolia's No. 2 Krug, 466 ft. from S line of lease and 800 ft. S of S line of sherer 112-ac. tract in J. H. Edwards Sur.
Location.

Humble O. & R. Co.'s No. 3 Rudel-Oster, J. House Sur.
Cmtd. csg. 5,606 ft.

Shell Pet. Corp.'s No. 2 W. W. Baker, 630 ft. S of No. 1, J. Hause Sur.
Drlg. sandy shale 5,592 ft.

VANDERBILT—JACKSON COUNTY

Encio Gas Co.'s No. 1 J. H. Drummond, 330 ft. out of most easterly NE cor. of Drummond 499-ac. tract.
D.S. test 5,800-02 ft.; recovered 12 thribbles salt water and some oil.

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquiz Sur.
Rigged up and S.D.

Phillips Pet. Co.'s No. 1 State Realty, 1,000 ft. SW and 466 ft. NW of most easterly E cor. of Vanderbilt townsite, Blk. 95, R. Musquiz Sur.
Abnd. 6,006 ft.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50-ac. of Miller 100-ac. tract in Ray Musquiz Sur.
Rig up.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Drlg. sand 90 ft.

CLEVELAND—LIBERTY COUNTY

Gulf Prod. Co.'s No. 6-C Kirby, 3,796 ft. along N line of John Pleasants Sur. from NE cor. James Eldridge Sur. and 217 ft. E at right angles.
Moving in rig.

ESPERSON—LIBERTY COUNTY

General Crude's No. 13 Moore's Bluff, 150 ft. W of E line and 2,100 ft. S of N line of lease and 1,000 ft. N of No. 12.
Rig up to pump 4,122 ft.; set csg. 4,084 ft.

General Crude Oil Co.'s No. 14 Moores Bluff, 1,675 ft. S, 10 deg. S min. E of No. 10.
Location.

General Crude Oil Co.'s No. 9 Davis, 1,200 ft. each way from S and E lines of lease in D. Kokernut Sur.
Drlg. shale 4,195 ft.

HANKAMER—LIBERTY COUNTY

George Devore et al's No. 1 S. E. Exell, 175 ft. S of Gulf's No. 1 and 165 ft. from E line of 175-ac. lease in Levi Barrow Sur.
Drlg. shale 5,412 ft.

HULL—LIBERTY COUNTY

C. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 100 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

Gulf Prod. Co.'s No. 104 Phoenix, 2,479 ft. from W line and 1,115 ft. from S line of 300-ac. tract in J. Devore Sur.
T.D. 5,094 ft.; initial production 154 bbls.; comp.

Gulf Prod. Co.'s No. 105 Phoenix, 1,154 ft. N, 200 ft. W of SE cor. of 300-acre tract in Jesse Devore Sur.
Drlg. shale 4,096 ft.

SOUTH LIBERTY—LIBERTY COUNTY

Humble O. & R. Co.'s No. 10 Welder, Duncan Sur., 400 ft. S of No. 9.
Drlg. shale 4,426 ft.

Texas Co.'s No. 22 Stalti, 250 ft. S and 50 ft. E of No. 14.
No report.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
T.D. 7,881 ft.; swabbing.

United North & South Dev. Co.'s No. 1 Plotner, 1,210 ft. SE No. 1 Stoddard and 136 ft. W of right of way S.T.L.&B.M.Ry. Sur.
T.D. 7,828 ft. in sand; waiting orders.

United North & South Dev. Co.'s No. 1 Unit No. 58, 250 ft. N and 200 ft. W of SE cor. of Unit No. 58.
Drlg. sticky shale 7,700 ft.

MARKHAM—MATAGORDA COUNTY

Hawkins Oil Co.'s No. 1 Hawks fee, 1,850 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
T.D. 600 ft.; derrick down.

Powers Prod. Co.'s No. 4 Myers, in line with wells Nos. 1 and 3, being 250 ft. E of No. 3.
Derrick down.

Rio Bravo Oil Co.'s No. 1 Sisk, 550 ft. N. 650 ft. W SE cor. of R. J. Sisk's 158-ac. tract in Lot 2, Wm. Hadden league.
Drlg. black shale 4,156 ft.

VAN VLECK—MATAGORDA COUNTY

Skelly Oil Co.'s No. 2 F. G. Cobb, 1,185 ft. E of W line and 2,515 ft. N of S line of F. G. Cobb lease in Marie Cummings Sur.
T.D. 5,800 ft.; set 9-inch csg. 5,465 ft.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 4-A A. R. Allen, 230 ft. from S line of lease and 933 ft. W of No. 3, N offset to Humble's No. 52 H. N. Moore, L. Smith Sur.
T.D. 5,130 ft.; cmtd. csg.

Cameron & Cameron's No. 1 Dudley, S offset to Strake's No. 1 Hammond.
Drlg. gumbo 3,140 ft.

Humble O. & R. Co.'s No. 1 Madeley State Land, Ransom House Sur., 150 ft. N offset No. 28 Madeley.
Drlg. shale 3,572 ft.

Humble Oil & Ref. Co.'s No. 53 H. N. Moore, 1,256 ft. SW of No. 24, 825 ft. NE of No. 47, 219 ft. from N line of lease, 382 ft. N of Alpha's No. 3-B Keystone Mills, L. Smith Sur.
W.O.C. 967 ft.

George W. Strake's No. 2-B Dean, W. C. C. Lynch Sur., 933 ft. N of No. 1.
Drlg. shale 1,615 ft.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 29 ft. S of N line of 4.83-ac. tract in W. M. Dyson Sur.
Prepare to spud.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 8 Kuhn, 1,320 ft. N and 250 ft. E of SE cor. of Mary E. Hall Sur. No. 2 in T. J. Notgrass Sur.
Drlg. sticky shale 3,268 ft.

Texas Co.'s No. 9 Kuhn, 990 ft. N and W of SE cor. of Mary E. Hall Sur. No. 2.
Rig up.

LIVINGSTON—POLK COUNTY

T. D. Humphries' No. 1 J. C. Whitforth Block H.
Derrick.

Sun Oil Co.'s No. 1 Pratt, A. Viesca Sur., 330 ft. N line and 330 ft. E line of lease.
Drlg. shale 4,081 ft.

J. Z. Werby et al's No. 3 Dick & Failing, 330 ft. from SW line of 160-ac. tract, A Viesca Sur.
T.D. 4,292 ft.; cmtd. csg.

GRETA—REFUGIO COUNTY

Atlantic Oil Prod. Co.'s No. 6-G O'Brien 400 acres, 933 ft. N of No. 5-G, Winfield Sur.
Location.

Atlantic and Stanolind's No. 5 G. O'Brien, 2,720 ft. N of most easterly SE cor. of 400-acre lease, 466 ft. W of E line in Winfield Sur.
Set 7-in. csg. 4,355 ft.; T.D. 4,389 ft.

Circle W Oil Co.'s No. 11 J. M. O'Brien, Crunk Sur.
Location.

Hewitt & Daugherty's No. 9 M. F. Lambert, 466 ft. from N line and midway between E and W lines of Blk. 16, Hardwick Sur.
Drlg. plug; T.D. 3,525 ft.;

Hewitt & Daugherty's No. 10 M. F. Lambert, midway between E and W lines of Hardwick Sur., 466 ft. S line, Blk. 343.28-ac. tract.
Comp.; T.D. 3,491 ft.; initial production 150 bbls. per day; T.P. 1,125 lbs.; C.P. 1,450 lbs.; 7/64-inch choke.

Hewitt & Daugherty's No. 23 M. F. Lambert, 466 ft. S line, 503 ft. E line of 43-acre tract, Blk. 16, Hardwick Sur.
Comp.; T.D. 3,491 ft.; initial production 85 bbls. daily, 250 lbs. working pressure.

Humble Oil & Ref. Co.'s No. 8 F. W. V. Heard, 1,490 ft. from E line, 1,394 ft. from N line of 337-ac. lease in Crunk Sur.
T.D. 310 ft.; W.O.C.

Humble Oil & Ref. Co.'s No. 9 Fannie Heard, 933 ft. E of No. 7, 1,150 ft. S of No. 8.
Location.

Humble Oil & Ref. Co.'s No. 12 J. F. B. Heard, 3,251 ft. from S line, 2,542 ft. from W line of lease.
Location.

Humble Oil & Ref. Co.'s No. 11 M. F. Lambert, 506 ft. from W line, 466 ft. from N line of No. 17-B, Hardwick Sur.
Location.

Humble O. & R. Co.'s No. 10 J. F. B. Heard, 919 ft. N, 170 ft. E of No. 8, Peoples Sur.
Comp.; T.D. 4,385 ft.; initial production 100 bbls. per day, ¼-inch choke; T.P. 475 lbs.; C.P. 600 lbs.

Humble O. & R. Co.'s No. 11 J. F. B. Heard, 933 ft. E of No. 8 or 4,300 ft. N line, 2,300 ft. E line of survey, Peoples Sur.
Drlg. plug 4,384 ft.

Humble O. & R. Co.'s No. 7 Fannie Heard, Ximines Sur., 2,438 ft. S of most northerly N line, 2,472 ft. E line 337.14-ac. tract.
Comp.; initial production 100 bbls. per day; ¾-inch choke; T.D. 4,375 ft.

Stanolind O. & G. Co.'s No. 3 J. M. O'Brien, Peoples Sur.
Moving in rig.

United Prod. Co.'s No. 14 Fox (D.D.), 466 ft. from N line of 848-ac. tract and 1,060 ft. W of No. 11, Wm. Hews and L. Brown Sur.
Drlg. shale 6,495 ft.

United Prod. Co.'s No. 10 M. F. Lambert, Charles Hardwick Sur., 466 ft. from S line, 506 ft. from E or W line of Blk. 17.
Preparing to set surface csg.; drlg. sticky shale 1,212 ft.

United Prod. Co.'s No. 11 M. F. Lambert, E. W. Hardwick Sur., 434 ft. from S line, 506 ft. from E line of Blk. 2.
Derrick.

United Prod. Co.'s No. 12 M. F. Lambert, Hardwick Sur., 469 ft. from S line, 506 ft. from W line of Blk. 4.
Rigging up.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 1 Tom Heard, center of Blk. 16.
T.D. 5,351 ft.; (work over).

Houston Oil Co.'s No. 9 Wilson Heard, Refugio Sur., 546 ft. N line, 150 ft. W line.
T.D. 3,665 ft.; (work over).

Houston Oil Co.'s No. 16 Rooke, 600 ft. NW of No. 15, Mullins Sur.
Coring 4,910 ft.

United Prod. Co.'s No. 3 Tom Heard (D.D.).
Comp.; T.D. 4,944 ft.; initial production 200 bbls. per day, ¼-inch choke; C.P. 535 lbs.; T.P. 135 lbs.

United Prod. Co.'s No. 8 Wilson Heard, 1,079 ft. SE from most northern point along NE boundary line of lease, thence 330 ft. SW at R/A.
Prepare to drill plug.; T.D. 4,943 ft.

United Prod. Co.'s No. 8 J. A. Lambert, 855 ft. N of NW cor. of W. Heard tract and 150 ft. W of tract line, L. M. Rogers Sur.
Drlg. shale and lignite; T.D. 6,580 ft.

United Prod. Co.'s No. 9 Shelly Ryals, Refugio Town tract, 1,475 ft. W of E line, 200 ft. N of S line of tract.
Coring ahead 6,610 ft.

COLETTA CREEK—VICTORIA COUNTY

American Liberty Oil Co.'s No. 1 Terrell.
Drlg. 1,640 ft.

American Liberty Oil Co.'s No. 1 Gaugler, SE cor. of Gaugler 268-ac. tract and just N of Petrol Corp.'s No. 1 Machalec.
Drlg. 2,300 ft.; shale.

Rupert Cox's No. 1 John Zimmer, 3,185 ft. NE from SW cor. along NW line and 330 ft. SE at R/A, R. Manchola League.
T.D. 2,150 ft.; tested 450 lbs. in 5 min. from 2,145-50 ft.

Come. Oil & Gas Co.'s No. 1 Dietzel, 150 ft. from N and E lines of lease, R. Manchola Sur.
Location.

Albert Plummer's No. 1 Terrell, 698 ft. from NW line, 330 ft. from NE line of 157-ac. tract in Manchola Sur.
Spudded in.

Rupert Cox' No. 2 John Zimmer, SE from cor. of 20-acre tract, R. Manchola Sur.
Location.

Nutex Oil Co.'s No. 2 John Zimmer, 300 ft. each way out of NE cor. of W 60-acre tract of 120-acre tract, R. Manchola Sur.
Location.

Feltex et al's No. 1 Dietzel, 130 ft. NW line and 330 ft. SW line of Dietzel 50-acre lease, Manchola Sur.
T.D. 3,742 ft.; tested salt water 2,926-54 ft.

Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
Drlg. 3,210 ft.; shale.

KEERAN—VICTORIA COUNTY

Humble Oil & Ref. Co.'s No. 2 Mitchell, 6,500 ft. from NW line and 7,000 ft. from SW line of 5,000-ac. tract.
Drlg. shale 7,700 ft.

Gulf Prod. Co.'s No. 6 Keeran, begin at intersection of R.R. and SW line of survey, thence NE along R.R. 6,257 ft., thence NW at R/A 2,539 ft. in M. DeLeon Sur.
Drlg. 5,659 ft.; sticky shale.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Humble O. & R. Co.'s No. 1 McFadden Est., 2,000 ft. S, 15 deg. W of Lion O. & R. Co.'s No. 1 McFadden in C. O. Edwards Sur.
Drlg. out sidetracked hole.

Humble Oil & Ref. Co.'s No. 2 McFaddin, C. O. Edwards Sur.
Moving in rig.

Humble O. & R. Co.'s No. 15 O'Connor, N 60 deg. W 933 ft. of No. 4 in Keeting Sur.
T.D. 3,051 ft.; comp. 100 bbls. of fluid, 30 per cent salt water.

Humble Oil & Ref. Co.'s No. 16 O'Connor, 933 ft. N by 45 deg. E of well No. 15.
Location.

Texas Co.'s No. 2 McFaddin, 9,150 ft. S and 200 ft. at R/A out of NW cor. of C. M. B. Hoyt Sur.
Cmtd. csg.; T.D. 5,195 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 10 Janner.
Waiting on surface csg. 153 ft.

Sun Oil Co.'s No. 2 Kubel.
Drlg. sticky shale 964 ft.

LOUISIANA—WHARTON COUNTY

Pure Oil Co.'s No. 1 Adams, T. W. Heard Sur., Sec. 24, Abst. 465, 471 ft. NW cor., 467 ft. from SW line out of most westerly NW cor. of section.
Drlg. sandy shale 4,520 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres.
Drlg. sandy shale 6,775 ft.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Brownie Babbette Oil Co.'s No. 1 R. A Moore, 562 ft. W, 50 ft. S of NE cor. of E½ of SE Sec. 18-12s-12w.
Washed well, but failed to flow 6,928 ft.

Shell Pet. Corp.'s No. 3 State.
Csg. stuck; will cmt. at 5,564 ft.

BAY ST. ELAINE—TERREBONNE PARISH

Texas Co.'s No. 8 State Bay St. Elaine.
Abnd. 3,715 ft.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Prod. Co.'s No. 1 Mrs. Estelle Comeaux and others' 675.6 ft. W and 511.4 ft. S of NE cor. of Sec. 54-8s-3e.
Cmtd. 9⅝-inch csg. 7,333 ft.; T.D. 7,849 ft.

Superior Oil Producing Co.'s No. 1 Sidney Fail, 542.9 ft. W and 511.4 ft. N of SE

cor. Sec. 27-8s-3e.
Cmtd. csg. 7,855 ft.
Superior Oil Prod. Co.'s No. 1 Eddis-Prejean (Alex Forrestier), 2,021.3 ft. W and 423.4 ft. S of NE cor. of Sec. 34-8s-3e.
Drlg. shale 7,817 ft.
Superior Oil Co.'s No. 2 Hermances, 1,175 ft. S, 597 ft. E of NW cor. Sec. 34-8s-3e.
Cmtd. 13⅜-inch csg. 1,284 ft.
Superior Oil Prod. Co.'s No. 1 Adras Guilbeau, 492.6 ft. E and 508.2 ft. S from NW cor. of SW Sec. 26-8s-3e.
Drlg. sandy shale 6,997 ft.
Superior Oil Prod. Co.'s No. 1 Walter V. Larcade, 442.4 ft. N and 500.2 ft. S of NW cor. of Sec. 35-8s-3e.
Drlg. hard shale 6,927 ft.
Superior Oil Co.'s No. 2 Larcade, 502 ft. N and 1,197 ft. E, SW cor. Sec. 26-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 1 Euclide LeBlanc, 1,873 ft. S and 673.2 ft. W of NE cor of Sec. 33-8s-3e.
Drlg. shale 5,662 ft.
Superior Oil Prod. Cor.'s No. 1 Lucien Lavergne, 596 ft. E and 330 ft. N of SW cor. of Sec. 27-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 269.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 1 Auguste Martinez, 3,510.6 ft. S and 1,057.2 ft. W of NE cor. of Sec. 35-8s-3e.
Drlg. hard sand 9,291 ft.
Superior Oil Prod. Co.'s No. 1 Leonard Savoie, 314 ft. W and 658 ft. N of SE cor. Sec. 26-8s-3e.
Reaming; T.D. 8,565 ft.
Superior Oil Co.'s No. 3 Hermandes, 329 ft. from S line, 669 ft. W of NE cor. of NW of Sec. 34-8s-3e.
Derrick.
Superior Oil Co.'s No. 2 Iseringhauser, 689 ft. from W line, 330 ft. from N line of 31.86-acre tract, Sec. 35-8s-3e.
Bldg. derrick.
Superior Oil Co.'s No. 1 L. Johnson, 1,623 ft. N and 762 ft. E of SW cor. of NE of Sec. 34-8s-3e.
Drlg. sandy shale 3,076 ft.
Superior Oil Co.'s No. 3 Larcade, 542 ft. E and 500 ft. N of SW cor. of Sec. 36-8s-3e.
Derrick.

CAILLOU ISLAND—TERREBONNE PAR.

Texas Co.'s No. 12 State Caillou Island 2,420 ft. E and 73 ft. S of NW cor. of Sec 20-23s-26e.
Drlg. shale 3,734 ft.
Texas Co.'s No. 14 State-Caillou Island, 1,514 ft. E and 2,628 ft. S, NW cor. Sec. 20-23s-26e.
Capping piling.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton Oil Co.'s No. 4 School Land 2,891 ft. W and 150 N of SE cor. of Sec 16-4s-13w.
Derrick.
Texas Co.'s No. 1 Miami Corp.
Drlg. lime 5,924 ft.

EDGERLY—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Hunter, 1,366 ft N 425 ft. W of SE cor. SW Sec. 21-9s-11w
Drill stem stuck 5,364 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e.
Building derrick.
Texas Co.'s No. 15 State, 2,602 ft. N and 1,368 ft. W, SE cor. Sec. 31-21s-16e.
Location.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
Coring shale with sand 8,837 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 2 Hanszen, 400 ft. W and 200 ft. S of No. 1 in Sec. 14-12s-10w
Drlg. sand 5,986 ft.
Gulf Ref. Co.'s No. 15-A M. P. Irwin, 368 ft. N and 241 ft. W of the SE cor. of Sec. 13-12-10.
Drlg. hard sand 5,308 ft.
Wilfred LaHay's No. 1 Roux, Sec. 24-12s-10w.
Shale 3,986 feet.; S. D.
Texas Co.'s No. 12-B State, 500 ft. SE of No. 10-B or 1,360 ft. E and 149 ft. S of NE cor. of Sec. 13-12s-10w.
Drlg. hard sand 5,667 ft.
Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease, Sec. 13-12s-10w.
Location.
Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 320 ft. E of SW cor. Sec. 13-12s-10w.
Sand 7,491-7,629 ft.; old T.D. 7,986 ft.; Comp. as a dry gas well 2,250 lbs. on ¾-inch choke; S.D.
Union Sulphur Co.'s No. 9 Humble, 300 ft. E and slightly N of No. 1 well, or 330 ft. N and 370 ft. E of the SW cor. of Sec. 12-12s-10w.
Plugged back from 4,180 to 3,980 ft.
Yount Yee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.
Yount Lee Oil Co.'s No. 2-A Gulf Land, 1,100 ft. S and 50 ft. E of the NW cor. of Sec. 21-12-10.
Derrick.
Yount Lee Oil Co.'s No. 15-A Gulf Land, 1,160 ft. S and 715 ft. W of the NE cor. of the SW of Section 16-12-10.
Rig up.
Yount Lee Oil Co.'s No. 1 School Land, 1,160 ft. S, 715 ft. W of NE SW of Sec. 16-12-16w.
Location.

NEW IBERIA—IBERIA PARISH

I. Delcambre's No. 1 Viatar, 150 ft. E, 150 ft. S and 150 ft. W of SE cor. of tract, Sec. 41-12s-5e.
Drlg. 150 ft.
Harrison & Abercrombie's No. 1 J. E. Schuring, 3,480 ft. S 75 deg. 25 min. west along section line from E cor. of fractional Sec. 44-12s-3e, and thence 1,121 ft. N 11 deg. 35 min. W, or at R/A to said line in Sec. 56-12s-7e.
Drlg. 2,725 ft.; shale.
G. D. Spell's No. 1 Sadiator, 25 ft. NW of No. 1 in A. B. Bernard Sur., Sec. 54.
Abnd. 3,870 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 9 Wait, 330 ft. E and S of the C of the lease, and is N of No. 8 Wait.
Drlg. shale 3,800 ft.
Magnolia Pet. Co.'s No. 3 Willett, 335 ft. from S line, 990 ft. from W line of NW Sec. 7-9s-6w.
Rigging up.
Shell Pet. Corp.'s No. 2 C. L. Johnson, 330 ft. out of SE cor. of 80-ac. lease, and offset to Magnolia's No. 6 B. T. Wait.
Cmtd. csg. 6,974 ft.
Shell Pet. Corp.'s No. 1 Scott, 330 ft. out of NW cor. of lease.
T.D. 7,267 ft.; to plug back.
Shell Pet. Corp.'s No. 5 Stratford, 1,094 ft. S, 330 ft. E of NW cor. of Sec. 18.
Coring 6,500 ft.
Shell Pet. Corp.'s No. 3 Ardoin, 990 ft. S and 300 f.. E of NW cor. S½ NW Sec. 18-10s-6e.
Derrick.
Shell Pet. Corp.'s No. 3 Willett, 300 ft. N and 990 ft. S of SW cor. of NW cor. of Sec. 7-8s-6w.
Rig up.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 14 Houssiere-Latiolle, 260 ft. N of No. 13, Sec. 47-9s-2w.
No report.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 593 ft. W of NW cor. Sec. 30-21s-20e.
Drlg. shale 3,420 ft.
Texas Co.'s No. 11 L.L.&E., Sec. 30-21s-20e
Drlg. 3,278 ft.
Texas Co.'s No. 12 L.L.&E.
Derrick.
Texas Co.'s No. 26 Lake Barre, 150 ft. N from No. 22, Sec. 30-21s-20e.
Drlg. salt 1,414 ft.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche Basin Levee Dist.
D.S. stuck 3,252 ft.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 11 Lake Pelto, 1,600 ft. SW of No. 5.
Drlg. sand 5,267 ft.
Whitstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35 19s-16e.
S.D. 2,700 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran. 650 ft. N and 21 deg. 30 min. E of No. 2 in Twp. 20s-26e.
Driving piling.
Humble O. & R. Co.'s No. 24 Cockrell-Moran. 400 ft. E, 100 ft. S of Freeport Sulphur's No. 11 Cockrell-Moran. SE of Sec. 24-20s-26e.
Drlg. 1,285 ft.

LEESVILLE—LAFOURCHE PARISH

Robert Bowles' No. 1 Crosby.
T.D. 4,525 ft.; P.B. 1,900 ft. and drilled to 3,880 ft.; D.S. stuck.
Robert Bowles' No. 2 Crosby.
Comp. 375 bbls., ¼-in. choke; T.P. 425 ft.
Emerald Pet. Co.'s No. 7 State of Louisiana.
Derrick.
Gulf Prod. Co.'s No. 9 Bernard, midway between Gulf's No. 3 and No. 7 on L. Bernard lease, 48 ft. from NS line of lease, Sec. 36-21s-22e.
Derrick.
Gulf Prod. Co.'s No. 8 Bernard, 568 ft. E along S line of 5.08-ac. tract from SW cor. and 446 ft. N at right angles, Sec. 26-21s-22e.
Drlg. sandy shale 3,781 ft.
Emerald Pet. Co.'s No. 8 State of La., 455 ft. N of No. 1.
T.D. 5,200 ft.
Emerald Pet. Co.'s No. 9 State of La., 600 ft. S of No. 1.
T.D. 3,710 ft.; comp. 1,200 bbls., ⅝-in. choke, 40 per cent salt water.
Emerald Pet. Co.'s No. 10 State, west bank. 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank. 327 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank. 250 ft. S of well No. 1.
Location.
Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 808 ft. E of SW cor. Sec. 26-21s-22e
S.D. 3,670 ft.
Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e.
S.D. 2,135 ft.
Lincoln Oil Co.'s No. 1 Constantine.
No report.
Texas Co.'s No. 20 L.L.&E., Sec. 27-21s-22e
Rigging up.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-10s-12w
Drlg. shale 6,516 ft.
George W. Strake's No. 1 Moss, 575 ft. S and 70 ft. W of NE cor. of SW NW Sec. 8-10s-9w.
Drlg. shale 6,405 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.).
Drlg. 6,697 ft.; shale.
Union Sulphur Co.'s No. 1 Farquaher, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 3-ac. tract.
Drlg. sandy shale 6,642 ft.

PORT BARRE—ST. LANDRY PARISH

Phillips Pet. Co.'s No. 1 Sibille, 3,063 ft. S from R.R. along W line of Sibille Co., Inc., 180-acre tract and 50 ft. E in Sec. 7-6s-6e.
Drlg. 3,450 ft.; shale.
Texas Co.'s No. 24 Botney Bay, 600 ft. S along E line, 150 ft. W at R/A from most southerly NE cor. of Botany Bay Lumber Co. lease, Sec. 4-6s-5e.
Location.
Texas Co.'s No. 22 Botany Bay, 450 ft. due E of No. 2, Sec. 4-6s-5e.
Drlg. water sand 3,122 ft.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 3 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w.
Drlg. shale 8,746 ft.
Humble O. & R. Co.'s No. 1-B Devilbiss.
Drlg. shale 2,237 ft.
Humble O. & R. Co.'s No. 1 Martin Kratzer, 400 ft. out of SE cor. 120-ac. tract, Sec. 14-9s-4w.
Drlg. shale 8,631 ft.
Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Cmtd. csg. 8,755 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land
T.D. 5,752 ft.; top salt 5,745 ft.; P.B. to 4,750 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 770 fee (D.D.).
Drlg. sticky shale 3,781 ft.
Union Sulphur Co.'s No. 795 fee.
Drlg. shale; show of oil 5,410 ft.
Union Sulphur Co.'s No. 800 fee, 2,296 ft. N and 311 ft. W of C of Sec. 29-9s-10w.
Comp. 200 bbls. per day; T.D. 2,602 ft.
Union Sulphur Co.'s No. 801 fee, 1,862 ft. N, 670 ft. E of C of Sec. 29-9s-10w.
Drlg. sticky shale 2,407 ft.
Union Sulphur Co.'s No. 802 fee, 908 ft. N, 1,340 ft. E of C of Sec. 29-9s-10w.
Drlg. sand 3,839 ft.
Union Sulphur Co.'s No. 805 fee.
Drlg. rock 2,134 ft.
Union Sulphur Co.'s No. 2 Kelly, 1,345 ft. S, 198 ft. W of the NE cor. of Sec. 30-9s-10w.
Drlg. sandy shale 4,325 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10. Sec. 12-13-3w.
T.D. 7,439 ft.; temp. S.D.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 68 G.N.G.
Drlg. sand 3,694 ft.
Trio Oil Co.'s No. 2 Gray, 233 ft. N and 22 ft. W of SE cor. of NE SW NE Sec. 33-10s-12w.
Drlg. 2,953 ft.
Vinton Oil Co.'s No. 1 J. G. Gray, 230 ft. from N line and 545 ft. from E line of SE NE Sec. 4-11s-12w.
Drlg. 202 ft.
Vinton Pet. Co.'s No. 2 Mathilda Gray, 100 ft. N of No. 1 and in Sec. 33-10s-12w. (W.O.); T.D. 3,225 ft.; W.O.C.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn, 300 ft. E of No. 7.
Coring sand 7,214 ft.

MISCELLANEOUS WILDCATS

TEXAS

ANGELINA COUNTY

Thayer et al's No. 1 Dearmond, J. T. Peavy Sur., 2¼ miles SE of Zavalla.
Hard lime 1,915 ft.; T.D.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
D.S. stuck 5,963 ft.
Harrison & Abercrombie's No. 1 Bernard River Land, 1,000 ft. out of SE cor. of Lot 23.
Drlg. sandy shale 6,859 ft.
Jack Clark tr.'s No. 1 J. M. Spear, 150 ft. from N line and 150 ft. from W line of Lot 4, in Pinckney Sur.
Temp. abnd. 5,200 ft.
Gillock Pet. Co.'s No. 1 Frank Truksa, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
Coring ahead 5,454 ft.
Holt et al's No. 1 Griffith, J. B. Bailey Sur.
T.D. 4,200 ft.; waiting orders.
Turnbull & Irwin's No. 1 Braden, H.T.&B. Sur., SE of Sec. 50, 4 miles SE of Juliff.
Drlg. 1,600 ft.

BRAZOS COUNTY

Buck Wallace's No. 1 Broach, 1,000 ft. from S line, 400 ft. from W line of 251-ac. tract in G. W. Singleton Sur.
T.D. 369 ft.; S.D.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
T.D. 6,625 ft.; washing to bottom.
Herman Heep's No. 3 Weider.
Drlg. 5,480 ft.
Mills Bennett Prod. Co.'s No. 1 R. Adams, C of NW line of Sec. 45.
Abnd. 6,829 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 1,200 ft. SE of NW cor. of Sec., 2,200 ft. SW at right angles in I.&G.N. Sur.
S.D. 6,194 ft.
Quintana Pet. Co.'s No. 1 M. A. Olmstead, 467 ft. N 88 deg. 20 ft. E along S line from SW cor. of 128-ac. tract and 425 ft. NW at right angles in M. Baton Sur.
Abnd. 5,430 ft.

FORT BEND COUNTY

Humble O. & R. Co.'s No. 1 Mrs. Anna Hackstedt, 466 ft. at right angles from SE and SW lines 246.9-acre tract in Robert Hodges Sur.
Drlg. shale 4,840 ft.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
Drlg. shale 2,201 ft.
Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur.
Prepare to spud.
Wilks et al's No. 1 Norris, 300 ft. W and 1,352 ft. S of N cor. of 535-ac. tract (5 miles S of Needville).
Rigged up and S.D.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
Rig up.
H. E. Sedberry, trustee's No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 166 ft. NE line, Lot 66, Sec. 7, Hall & Jones Galveston Island.
Cmtd. surface csg. 53 ft.
Humble O. & R. Co.'s No. 1-B Stewart, 415 ft. S of Dickinson Bayou, 460 ft. E of E line of Blk. 16, Beatty Subd., John Sellers Sur.
Drlg. shale 2,048 ft.
Pure Oil Co.'s No. 1 J. W. Shelor (231.2 acres), 2,760 ft. S of Dickinson-San Leon highway and midway E and W lines of lease, B.B.B.&C. Sur.
Cmtd. 13⅜-in. csg. 1,514 ft.; T.D. 1,523 ft.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
Location.
Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
Laying water line; T.D. 880 ft.
W. D. Roan et al's No. 1 D. C. Kelly, 1,533 ft. from N line and 168 ft. from E line of U. Sanders Sur., near Carlos.
T.D. 2,360 ft.
J. H. Woodward et al's No. 1 O. A. Hamilton, center of Hamilton 95.5-ac. tract 8 of Richards in the O. Hill Sur.
S.D. 3,290 ft.

HARDIN COUNTY

Wilcox O. & G. Co.'s No. 1 Sternberger, 1,331 ft. N of S line and 1,311 ft. W of E line of C. Dorsey Sur. No. 1.
Drlg. 6,054 ft.

HARRIS COUNTY

C. B. Bunte, Inc.'s No. 1 Laura Lackner, 6,400 ft. from E line, 194 ft. from S line of Henry Reinerman Sur., near NW city limits of Houston.
Location.
L. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.
General Crude Oil Co.'s No. 1 Borick est., 5,606 ft. S of N line of survey and 1,546 ft. W of E line of 1,436-ac. tract in John C. Ogburn Sur.
T.D. 6,724 ft.; P.B. to 6,451 ft.; abnd.
Farrell Bros. Co.'s No. 1 Brooks Est., 7,400 ft. S and W of NE cor. of R. & R. Vince Sur.
Cmtd. csg. 412 ft.
W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
S.D. 3,846 ft.
Quaker City Oil Co.'s No. 1 Goar, Sarah McKissick Sur.
Abnd. 6,758 ft.

HOUSTON COUNTY

Boone Bros.' No. 2 Trinity State Bank, 660 ft. SE of NE, Charles McEllis Sur.
Derrick.
H. L. Hunt's No. 1 Starr, SW cor. 223-ac. tract, J. Walker Sur.
Derrick.
Sterling Oil & Ref. Co.'s No. 1 A. J. Knox, Omy Weir Sur., A. J. Knox 100-ac. tract.
Derrick.

JEFFERSON COUNTY

Magnolia Pet. Co.'s No. 1 E. Herbert Trust, 990 ft. N, 330 ft. E of SW cor. of P. M. Bell Sur. No. 2.
S.D. 6,348 ft.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease
Fishing for 4½-in. D.P.; T.D. 8,594 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 300 ft. from E and 600 ft. from S line of lease. P. P. Deevers Sur.
Drlg. 3,203 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 2,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
S.D. 2,710 ft.
Magnolia Pet. Co.'s No. 1 Maco Stewart, 2,600 ft. E and 1,370 ft. S of NW cor. of 350-ac. tract in A. Cherry Sur.
Drlg. shale 4,941 ft.
A. L. Maxwell's No. 1 M. D. Hinchliff, 300 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Hicks, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
Fishing 5,158 ft.
Turnbull and Irwin's No. 1 Lynott and Buffum, 466 ft. S and E of NW cor. of SE 100 acres of W 400 acres of 856-ac. tract, James Robeson Sur.
Spudded.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Robbins, J. C. Frans Sur.
Washing to bottom; T.D. 6,657 ft.
Dr. Griffith's No. 1 fee, 3,000 ft. from N line and 3,000 ft. from W line of Wm. E Bell Sur.
Rig up and S.D.
Powers Prod. Co.'s No. 1 Northern Irrigation Co., 300 ft. E and 125 ft. N of Sec. of Lot No. 5, Blk. 9, I.&G.N. Sur.
Drlg. 3,326 ft.

MONTGOMERY COUNTY

Brown & Wheeler et al's No. 1 Jones, 440 ft. out of NW cor. of S 175 acres of 350-ac. tract.
Location.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richa..

Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
T.D. 2,986 ft.; moving in heavier rig.
Texas Louisiana Oil Co.'s No. 1 Starks, 2,460 ft. N of NW cor. M. Delano Sur. 68, 10,500 ft. E at R/A.
T.D. 5,055 ft.; S.D.

POLK COUNTY

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1½ mile NE of Corrigan
S.D. 60 ft.
J. F. Anderson's No. 1 E. I. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 50, P. J. Mineral Sur.
Waiting on a new mud pump; T. D. 5,304 ft.
A. S. DeLee's No. 1 Martha E. Roberts, 2,000 ft. W and 5,000 ft. S of most western SW cor. of P. A. Sublett Sur., J. F. De Rumayor Sur.
Moving in material.
Kirby Pet. Co.'s No. 2 Kirby, 466 ft. from N and E lines of J. Stephenson Sur.
Cored sandy shale 5,340-50 ft.; showed oil, gas and salt water.

REFUGIO COUNTY

Heard-Holland Oil Co.'s No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd.
T.D. 5,848 ft.; reset tubing.
Quintana Oil Co.'s No. 2-A O'Connor, 450 ft. N and 450 ft. W of No. 1.
No report.
Quintana Oil Co.'s No. 1-B O'Connor, 139 ft. E line and 2,525 ft. S line of B.B.B.&C. Sur., Abst. 96.
No report.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 1 Bryan & Flourney, 1,926 ft. from N and 725 ft. from E lines of Sec. 14, S.P.R.R. Sur.
S.D. 2,005 ft.

SAN JACINTO COUNTY

Darby Jones' No. 1 McBee.
Sand and shale 3,017 ft.; S.D.

VICTORIA COUNTY

Texas Co.'s No. 1 J. B. Midgett, N 35 deg. W 1,000 ft. and S 55 deg. W 1,000 ft. from SE cor. of lease in T.&N.O. Sur., Sec. 14.
Drlg. shale 4,690 ft.

WALLER COUNTY

De Arman Bros.' No. 1 Bains-Downman, 150 ft. SE line, 150 ft. from SW line of tract in John McFarland Sur.
Drlg. shale 3,575 ft.
Capps & Sloan's No. 1 Vaughn, John McFarland Sur.
Waiting on pump unit; T.D. 2,924 ft.

WHARTON COUNTY

Texas Gulf Prod. Co.'s No. 1 Kresta, 440 ft. N and E from SW cor. of tract in Sec. 54, W. B. Ivey Sur.
Drlg. sandy shale 6,064 ft.

SOUTH LOUISIANA

ACADIA PARISH

Woodley Pet. Co.'s No. 1 Daigle, NE cor. SE Sec. 24-7s-1e.
Drlg. shale 8,000 ft.

ALLEN PARISH

Humble O. & R. Co.'s No. 1 Industrial Lumber Co., 1,320 ft. W line and 2,440 ft. S line Sec. 21-3s-5w
Drlg. shale 4,703 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Location.

BEAUREGARD PARISH

Federal Pet. Co.'s No. 1-B Lutcher-Moore 6 miles NW of No. 1 Lutcher-Moore and near Fields.
Drlg. shale 7,933 ft.
Gulf Ref. Co.'s No. 1 Lutcher Moore, 660 ft. from S line, 760 ft. from E line, NE Sec. 25-6s-12w.
Drlg. sand 45 ft.

CALCASIEU PARISH

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 13-9s-8w.
Location.
Steinberger Pet. Co.'s No. 1 Drew, 330 ft out of NW cor. of NE¼ of Sec. 36-10s-11w, 6½ miles SW of Sulphur.
Location.
Union Sulphur Co.'s No. 2 Barbe, 279 ft. S and 350 ft. W of NE cor of SE of Sec. 11-9s-3w.
T.D. 7,916 ft..; lost pipe in hole; trying to sidetrack at 7,890 ft.
Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft. E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
Rigging up.

EAST FELICIAN PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
Cmtd. surface csg. 100 ft.

CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,270 ft. N of NE cor. Sec. 1-14-9w in Twp. 13s-9w.
Drlg. 3,825 ft.

EVANGELINE PARISH

L. Puckett's No. 1 Vidrine, 500 ft. S of old J. E. Ladeau's No. 3 Goodwin and approximately 4,500 ft. E and 1,700 ft. N of SW cor. of Sec. 34-3s-2e.
Derrick.

IBERIA PARISH

Diamond Corp.'s No. 1 Edmond Victor, 1,980 ft. E and 450 ft. from SW cor. of Sec 41-12s-5e.
S.D. 1,800 ft.

IBERVILLE PARISH

Gross Pet.'s No. 1 Angelloz.
S.D. 2,270 ft.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation
Fishing 6,244 ft.
R. L. Gay, trustee's No. 1 Godchaux, 3,921 ft. N and 1,746 ft. E in common cor. of Lots 34 and 26, Twp. 15s-19e.
S.D. 6,326 ft.
Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 300 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D.

PLAQUEMINES PARISH

Texas Co.'s No. 13 State-Garden Island Bay, Sec. 107-23s-32e.
Location.
Venice Corp.'s No. 1 Burras.
Drlg. 1,573 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 520 ft. E, NW cor. NE SW Sec. 35-6n-2e.
Location.
C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 880 ft. NE of SW line of Sec 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 3,193 ft. W of SE cor Sec 135-14s-14e.
Cmtd. 12½-in. csg. at 1,152 ft.; T.D. 1,157 ft.; drlg. plug.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec 28 5s-6e (workover).
S.D. 5,043 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec 17-8s-7.
Drlg. lime 8,324 ft.

ST. MARYS PARISH

Black et al and Edwards Drlg. Co.'s No. 1 Chetimancha, Sec. 34-13s-9e, 219-ac. tract approximately 500 ft. at right angles SE and SW lines of tract.
Temp. abnd. 6,501 ft.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line NE cor. Sec 32-11s-3e.
T.D. 4,056 ft.; fishing.

VERNON PARISH

Robert R. Williams, Sec. 8-1n-9w.
Rig up and S.D.

La.-Ark. Wildcats

(Continued from Page 73)

NATCHITOCHES PARISH

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-4.
S.D. for wtr., 1,088 ft.
Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
S.D.; rep. rig 2,272 ft.
Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,033 ft.
Roy A Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 28-9-10.
Coring 2,325 ft.
J. B. Storey's No. 1 W. W. Page est., NE cor. SE NW Sec. 18-8-9.
Coring 2,610 ft.

OUACHITA PARISH

Carbon Consolidated's No. 9 Guthrie, 2,320 ft. N, 1,630 ft. E, SW cor. Sec. 23, in Sec. 49-20-4e.
Drlg. 2,000 ft.
Hope Prod. Co.'s No. 4 Cole, 660 ft. S and W NE cor. Sec. 7-19-4e.
Set 6-in. 2,105 ft.
Maury Drlg. Co.'s No. 3 Frierson, Sec. 30-19-4e.
Set 12-in. 156 ft.; set 6-in. 2,160 ft.
United Public Service Co.'s No. 2 fee, 660 ft. S and W, NE cor. Sec. 26-19-3e.
Rigging up.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W, NE cor. NW SE Sec. 32-12-8.
S.D. 1,004 ft.
A. D. Mytiler's No. 1 La. Delta Pecan Co., 1,700 ft. N, 160 ft. E, SW cor. Sec. 27-13-11.
S.D. 857 ft.
Oynett et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-8.
S.D. for fuel 740 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S and W NE cor. SW NW Sec. 29-9-13.
Set 10-in. 20 ft.
R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W. SE cor NW NW Sec. 35-10-12.
Arranging to set 6-in. 1,558 ft.; T.D. 1,586 ft.
G. H. Collins' No. 1 Bellieu & Carter, 320 ft. S and W, NE cor. NW SW Sec. 21-9-13.
Dry and abd. 2,070 ft.
Gerhig Oil Co.'s No. 2 Burkett, 330 ft. N and E, SW cor. SE SE Sec. 9-9-13.
Set 6-in. 1,789 ft.; testing 2,025 ft.
Graham & Dalton's No. 1 Burkett, 330 ft. N and W of C Sec. 16-9-13.
W.O.S.R. 1,993 ft.
Halliburton & Meadows' No. 1 Jackson, 330 ft. S and E. NW cor. NE NE Sec. 15-9-13.
P.B. to 1,650 ft.
H. M. Harrell's No. 1 Paul, 660 ft. N, 330 ft. W. SE cor. NE SW.
Set 10-in. 60 ft.; drlg. 1,462 ft.
Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
W.O.S.R. 2,031 ft.
Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.
Steen Drlg. Co.'s No. 1-B A. J. Burkett, 330 ft. N and W SE cor. SE SW Sec. 9-9-13.
Set 12-in. 131 ft.; set 8¼-in. 1,785 ft.
Valley-Osage Oil Co.'s No. 1 Burkett, 330 ft. S and W NE cor. SW NE Sec. 10-9-13.
W.O.S.R. 1,962 ft.

RAPIDES PARISH

Evans & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e.
S.D. 2,130 ft.
C. D. Loe, Trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigging up.

UNION PARISH

Nemours Corp.'s No. 1 Haile, 1,980 ft. W, 660 ft. N, SE cor. Sec. 14-21-3e.
Drlg. 2,050 ft.

WEBSTER PARISH

Abney Oil Corp.'s No. 3 Slack, 660 ft. N, 576 ft. W, SE cor. NE SE Sec. 36-23-11.
S.W. and abd. 2,714 ft.
M. J. Kissick's No. 1 Cook, 952 ft. N, 695 ft. E, SW cor. NW NE Sec. 2-22-11.
S.W. and abd. 2,701 ft.

ARKANSAS

BRADLEY COUNTY

Seton Oil Co.'s No. 1 Murphy, 330 ft. S and W NE cor. SE Section 34-15-10.
Set 10-in. 185 ft.

COLUMBIA COUNTY

Dudney & Woodward's No. 1 Pearce, 330 ft. S and W, NE cor. NW Sec. 7-17-20.
Set 10-in. 132 ft.; S.D. 500 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W, NE SE Sec. 11-14-24.
Drlg. 2,570 ft.
E. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
S.D. 700 ft.
A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26
S.D. 1,992 ft
F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
Set 10-in. 110 ft.

LAFAYETTE COUNTY

Benedum & Trees' No. 1 Boccaw Lbr. Co., C NE NE Sec. 19-16-22.
Fishing for D.S. 3,825 ft.
Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
Coring 2,805 ft.
R. H. Neely's No. 1 Flemming, SW cor. NW SW Sec. 31-18-25.
Drlg. 2,656 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 3 Beck, SW cor. SE SW Sec. 34-15-26.
W.O.S.R. 2,940 ft.
Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.
Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
Set 6-in., 2,925 ft.; T.D. 2,929 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
Drlg. 2,433 ft.
Magnolia Pet. Co.'s No. 4 Olivet, 330 ft. S and W, NE cor. Sec. 4-16-26.
W.O.S.R. 2,947 ft.
Oil Well Oil Corp.'s No. 1 Dodd, 300 ft. S, 200 ft. E, NW cor. SW NE Sec. 10-19-28.
S.D.W.O. 2,750 ft.
Texarkana Oil Corp.'s No. 3 E. H. Beck, 330 ft. S and W NE cor. SE SE Sec. 33-15-26.
W.O.S.R. 2,927 ft.
John Wrather's No. 1 Beck, SW cor. SW SE Section 34-15-26.
W.O.S.R. 2,932 ft.

NEVADA COUNTY

O. F. Whittaker's No. 1-B Guttry, C SE SW Sec. 2-15-20.
W.O.S.R. 2,138 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.
J. S. Carnes' No. 1 Scott, 150 ft. S and E, NW cor. SW NE Sec. 18-14-18.
Arranging to test 1,835 ft.
T. J. Gaughan's No. 1 Bragg, 330 ft. N and E, SW cor. NE SE.
Set 10-in. 104 ft.
J. D. Reynolds' No. 1 Guttry, 452 ft. S, 150 ft. W, NE cor. NE SW Sec. 21-15-19.
W.O.S.R. 1,506 ft.

UNION COUNTY

Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Arrng. to test 2,764 ft.
Lion Oil Ref. Co.'s No. 10-A Fiennikeu, 200 ft. N, 630 ft. E, C Sec. 10-16-15.
Rigging up.
McCreslenn Oil Co.'s No. 2 G. Norman, 330 ft. N and W, SE cor. SE NE Sec. 3-18-13.
Set 6⅝-in. 3,561 ft.
McCreslenn Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. N and W, SE cor. NE NW Sec. 3-18-13.
P.B. from 3,577 ft.
Reuter Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
Rigged up and S.D.
Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 3,416 ft.

MISSISSIPPI

AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

CLARKE COUNTY

Clarke County O. & G. Co.'s No. 1 Kirkland, 1,320 ft. S, 660 ft. E NW cor. Sec. 10-2n-16e.
T.A. 4,000 ft.

HINDS COUNTY

Alexander & Weaver's No. 1 Mayer & Gordon, 552 ft. W, 217 ft. S NW cor. NE Sec. 36-6n-1e.
Set 8¼-in. 615 ft.; drlg. 2,305 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft W, 200 ft. S, C Sec. 24-7n-13w.
S.D. 3,890 ft.

LAMAR COUNTY

Hix & Germany's No. 1 Newman Lbr. Co., 200 ft. N, 10 ft. E of C Sec. 21-4n-16w.
Drlg. shale 3,325 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Drlg. 500 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Crook, 1,090 ft. S, 90 ft. W, NE, cor. Sec. 4-13s-18w.
Drlg. 175 ft.

RANKIN COUNTY

Love Pet. Co.'s No. 1 Pearl River Lbr. Co., Sec. 15-6n-2e.
Dry and abd. 4,266 ft.
Fred W. Hemsley's No. 1, G.M.&N. Ry., 1,775 ft. W. 575 ft. N. SE cor. NE Sec. 36-6n-1e.
Set 10-in. 718 ft.

SIMPSON COUNTY

Berry Corp.'s No. 1 R. T. Berry, Sec. 33-2n-4e.
Set 7-in. 2,048 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-2n-9e.
Partly rigged up and S.D.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL Sec. 14-14-1e.
S.D. 3,169 ft.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w.
Set 10-in. 300 ft. and R.D. (corrected).

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 718 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
S.D. 20 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA

CADDO—HOSSTON

Bayou State O. & G. Co.'s No. 1 Connell 1,900 ft. N, 1,198 ft. E. SW cor. Sec. 18-21-14.
W.O.S.R. 964 ft.
C. G. Gibbon's No. 1 Burglass, 578 ft. N, 660 ft. W, SE cor. NE NE.
Drlg. 1,865 ft.
Shore Line Oil Co.'s No. 43 Crystal, Sec. 18-21-16.
Comp. pumping 6 bbls. 1,065 ft.
Shoreline Oil Corp.'s No. 44 Crystal, 220 ft. S and E of C Sec. 13-21-16.
Rigging up.
Shore Line Oil Corp.'s No. 2 Harrell, 250 ft S and E of C Sec. 2-21-16.
Set 7-in. 1,031 ft.; W.O.S.R. 1,059 ft.
Shoreline Oil Corp.'s No. 3 Harrell, 250 ft. S. 220 ft. E, NW cor. SE SW Sec. 2-21-16.
Rigging up.
Shore Line Oil Corp.'s No. 1-B Standard 250 ft. N and W, SE cor. Sec. 13-21-16.
Recmtd. 1,058 ft.

CADDO—RODESSA

Ark.-La. Pipe Line Co.'s No. 1 Parker, 730 ft. S, 450 ft. E, NW cor. NE NW, Sec. 26-23-16.
Set 7-in. 5,447 ft.
United Gas Pub. Ser. Co.'s No. 1 Christian 724 ft. N, 1,382 ft. W SE cor. Sec. 23-23-16
Drlg. 4,993 ft.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor N¼ SW NE Sec. 18-7-11.
Drlg. 2,236 ft.
Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 1,920 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12.
S.D. 1,100 ft.
Foster & Hartman's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-13
S.D.; W.O. 2,696 ft.
E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
W.O.S.R. 2,580 ft.
H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.
Geo. L. Pace's No. 1 Ritter, 430 ft. N, 330 ft. E, SW cor. SW SE Sec. 26-8-12.
Comp. flowing 125 bbls. 2,389 ft.
Pelican Nat. Gas Co.'s No. 33 La. Long Leaf, 183 ft. S, 282 ft. E. cen. Sec. 29-8-11.
Dry and abnd. 2,636 ft.
Pelican Nat. Gas Co.'s No. 44 La. Long Leaf, 100 ft. S and E. NW cor. NE SW
Dry and abnd. 2,774 ft.
Set 6-in. 2,424 ft.; T.D. 2,604 ft.
Pelican Nat. Gas Co.'s No. 14 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SW Sec. 11-7-12.
Tested dry; W.O. 2,642 ft.
Texas Co.'s No. 3 R. Malner, 330 ft. N and W SE cor. Sec. 5-7-11.
Rigging up.
Texas Co.'s No. 1 H. E. Wilson, 330 ft. S and W NE cor. SE SE Sec. 31-8-11.
Derrick.
Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr Co., Sec. 2-8-12
S.D. 2,210 ft.; (corrected).

EAST TEXAS (BORDER COUNTIES)

CASS COUNTY

Eastern Texas Prod. Co.'s No. 1 J. S. Baker, Jesse Walling Sur.
Set 10-in. 112 ft.; S.D. for wtr. 2,703 ft.
R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.D. 4,016 ft

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, S. D Spain Sur.
P.B. to 3,524 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
S.D. 2,092 ft.
Givens & Holloway's No. 1 Wooten est. Winnie Mann Sur.
Fishing for D.S. 1,780 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Rigging up.
Fred Stovall Drlg. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
Drlg. 1,740 ft.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W M Blackburn Sur.
S.D. 3,366 ft.
Cliff Stovall's No. 1 Pickering Lbr. Co., G. H. Patterson Sur.
Set 10-in. 20 ft.
Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur
S.D. 250 ft.

ALABAMA

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
Drlg. 2,005 ft.

LAMAR COUNTY

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
Fishing for tools 4,180 ft.

NEW AND IMPROVED EQUIPMENT

Lunkenheimer Announces Automatic Liquid Gauge

The Lunkenheimer Co., Cincinnati, Ohio, has made a distinctive change in design in its Figure 1,183 automatic liquid gauge. All internal working parts—stem, gland, retaining ring, stuffing box washers and ball checks—are now made of stainless steel, to provide maximum resistance to corrosion and eliminate sticking. The new pressure rating is 350 pounds G. L. P. (gas-liquid) at 450° F. temperature.

The new Figure 1,183 has been tested in actual field service. It is adapted for use on pressure tanks, gravity tanks and other reservoirs handling liquids which attack brass or bronze where a noncorrodible, nonsticking gauge is essential.

Dependability and safety are insured, according to the manufacturer, by the exceptionally sturdy construction, automatic closure of ball checks in both upper and lower valves in the event of glass breakage, noncorrodible and nonsticking working parts, easy and safe replacement of new glasses, cone-shaped packings to prevent leakage around glass and minimize glass breakage due to overpacking and torsional strains, reduced fire and accident hazard, standard pipe plug in lower valve body for drain connection. Figure 1,183 is Parkerized. This provides a protective coating that retards rust and improves appearance. A booklet giving details will be sent upon request.

Unintentional Starting of Motor Is Insured Against

A new line of automatic motor starters, which prevent accidental starting and permit taking full advantage of the motor's capacity without danger of burning it out, is announced by the Lincoln Electric Co., Cleveland, Ohio. The starters are of the across-the-line type and fully meet underwriter's requirements.

It is impossible to close the starting current unintentionally owing to the design of the control. The red stop button extends around and beyond the green start button. Consequently a bump or fall against the control would move only the stop button. Once the motor is stopped, the only way it can be restarted is by pressing the recessed start button with the fingertip.

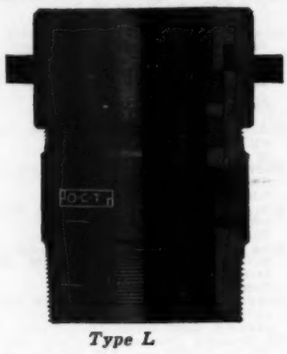
Full advantage of the motor's capacity is permitted by an inverse time-limit protection which allows carrying a small overload a long time or a heavy load a short time. Immediate motor starting upon resumption of current is insured by low voltage release with two-wire control.

The new starters are furnished in three types for different horsepowers and 110, 220, 440 and 550 volts. Mechanical moving parts are reinforced and protected against rust by cadmium plating. Long life is assured the relay armature by a cushion action which reduces wear. The internal parts of the starter are readily accessible. Moving contacts can be removed without tools of any kind. Stationary contacts can be removed by use of a screwdriver only.

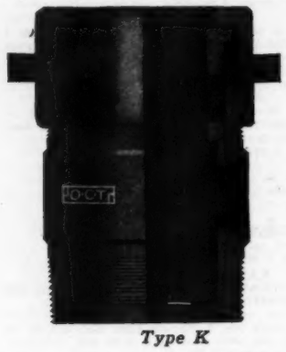
New Bradenheads Equipped With Two Sets of Packing

The Oil Center Tool Co., Houston, Tex., is now marketing Type L bradenhead, equipped with two sets of packing, one set for packing off on the casing and the other set for packing off around the casing collar, making it possible to repack around the casing collar under pressure. The upper end of the main body has the same size A.P.I. casing threads as the bottom, permitting screwing the bradenhead on the casing and screwing the blowout preventer on top of the bradenhead before running the inner string of casing, and cementing it, leaving the blowout preventer closed around the inner string while the cement is drying.

The O-C-T Type L bradenhead is made of forged steel throughout except the screw-down collar, which is cast chrome nickel steel. The screw-down collar has two lugs cast on the outside so that packing can be tightened at any time by the use of a sledge hammer. Packing is hydraulic or asbestos, according to the user's requirements. It is tested to 5,000 pounds cold water pressure.



Type L



Type K

The O-C-T Type K bradenhead is a duplicate bradenhead except that it does not seal around the casing collar and is therefore not repackable under pressure.

Asbestos Packing of New Type Introduced by J-M

Johns-Manville, 22 East Fortieth Street, New York, announces a new packing for reciprocating and centrifugal rods to be known as interlocked braided asbestos packing. Each individual strand of long fiber asbestos yarn is so interlocked in the braiding as to provide for the first time a packing with a completely integral braided structure. There

are no soft, heavy plaits to flatten; no jacket to wear through. Because it is braided square, rather than pressed into shape, it assures a better packing face on the rod, with more contacting area. The integral structure also results in greater resiliency and flexibility.

J-M interlocked braided is recommended for packing against saturated or superheated steam; hot or cold, fresh or salt water; and weak caustics and acids.

"Haynes Stellite Products in the Oil Fields" is the title of a 36-page booklet obtainable from the Haynes Stellite Co., Kokomo, Ind. It describes late methods and materials for hard-facing and hardsetting oil-well drilling tools and wearing surfaces of other equipment used in the oil industry.

Ampco Nonsparking Tools Decrease Hazards of Fire

Ampco metal nonsparking safety tools, manufactured by Ampco Metal, Inc., Milwaukee, Wis., are designed for use in oil refineries; paint, powder and chemical plants; pipe line work, public service company plants, and wherever there is fire or explosion hazard.

Ampco metal, a copper-aluminum-iron alloy, is said to have the physical properties of steel and the chemical properties of bronze. It is made in six grades, ranging in hardness from scleroscope 18-60 and from Brinell 115-340 points under a 3,000 kg. load. Tensile strengths of the various grades range from 60,000 to 100,000 pounds per square inch.

Supplementing its established line of Ampco metal nonsparking safety tools, this company is now prepared to supply a comprehensive line of handmade tools of beryllium copper. The dimensions coincide closely with the Ampco tools. This new alloy of beryllium copper, which has recently come on the market, is heat treatable, being of the precipitation hardening class of materials.

Besides providing a satisfactory material for such tools as wrenches, chisels, hammers, scrapers, screw drivers and the like, beryllium copper also makes it possible to design parts of equipment for use where fire and explosion hazards exist.

NEW TUMBLER SWITCH

A compact, easily installed starting switch, designed for use when hand-operated control at the motor is required and intended for direct mounting on the built-in terminal box of standard G-E fractional-horsepower motors, has been announced as a new product of the General Electric Co. The device, mounted in a substantial steel case and provided with a positive snap-action mechanism, is simple to install. It replaces the standard terminal-box cover-plate and requires no soldered connections or additional wiring.

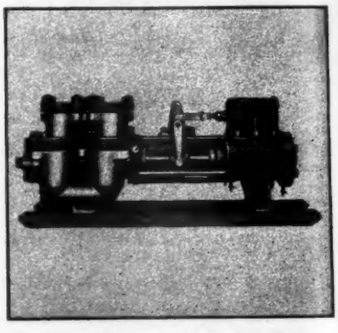
New General Service Pump Is Introduced by Oil Well

The Oil Well Supply Co., Dallas, Tex., recently introduced a new pump for boiler-feed and general service designated the "Oilwell" 6x4x6-A duplex steam pump. It weighs 818 pounds; the steam cylinder bore is 6 inches, the maximum fluid piston diameter is 4 inches and the length of stroke is 6 inches.

The outstanding feature is the close-clearance type "direct-flow" fluid end, which is similar in design and appearance to the fluid ends on the company's Imperial No. 14 and Imperial No. 20 slush pumps. The design of the fluid end provides large fluid passages and eliminates unnecessary twists and turns and all air pockets. This construction reduces flow-resistance to a minimum and increases pump efficiency to a maximum.

The fluid chamber is a one-piece, close-grained, semisteel casting. It is hydrostatically tested at 1,000 pounds per square inch pressure and is recommended for a maximum fluid working pressure of 500 pounds per square inch.

Bronze fluid valves of the wing-guide type with bronze seats and wide bearing



surfaces are regularly furnished. The valve seats have a tapered fit. The liberal valve area reduces flow restriction. Other types of valves and seats can be furnished to equip the pump for various kinds of service. Each fluid valve is located in an individual valve pot with a bolted cap such as used on a slush pump. This permits inspection or replacement of a single valve without the necessity of removing an entire valve deck.

Cast-iron follower type fluid pistons are furnished for pumping water and snap-ring type are furnished for pumping oil. The liners, which are removable and replaceable, are flanged and are held in place by the cylinder heads. Close-grained cast iron liners are standard equipment but bronze liners can be furnished.

The steam end of the pump is of sturdy construction and is recommended for a maximum steam working pressure of 250 pounds per square inch. Both steam cylinders and the cradle are integral parts of a close-grained iron casting which also includes the steam passages, valve surfaces, cradle-end cylinder heads, steam piston rod stuffing boxes, supporting feet and the steam inlet and exhaust connections.

Each of the cast iron steam pistons is equipped with two wide, step-cut piston rings. The steam valves are of the slide type and are reinforced for heavy-duty service. The valve chest is heavily constructed and is held in place by six large stud bolts.

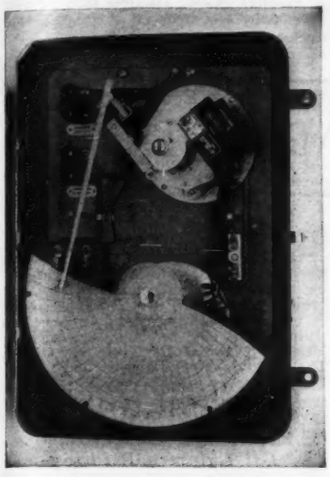
The heavy-duty valve gear includes a strong rocker-arm stand, drop forged

rocker arms, drop forged rocker arm shafts with integral cranks, heat-treated links, heat-treated link pins and double-guided heat-treated valve rods.

Both the steam and fluid piston rods are ground and polished high-carbon steel.

Provides Long Record on Fast-Moving Round Chart

The Bristol Co. of Waterbury, Conn., is now offering an electrical operation recorder, which provides a long record on a fast-moving round chart. This instrument, instead of making one circular record, draws a spiral curve starting at the outer edge of the chart and gradually



moving toward the center. This spiral record is accomplished by a telechron cam which continuously resets the record-making movement.

This instrument provides an open record with the easy filing and ready reference characteristics of the round chart. One form of this instrument is fitted with a chart-driving clock, making one revolution per hour and with a separate telechron motor-driven cam making one revolution in eight hours. The resulting record is a spiral curve covering eight rotations of the chart and with approximately one-fourth inch spacing of the record line.

The mechanism which records the occurrence of an operation is a small electromagnet which is energized when an external circuit is closed. The movement of this magnet actuates the pen arm and moves the inking pen approximately one-sixteenths of an inch.

The entire movement is housed in Bristol's moisture-proof rectangular Model 40M case.

HOSE HAS NO METAL LINING

Delmar tank filler hose, which has a smooth lining of a new type compound which, it is said, will not crack or leak and which will not slough off or disintegrate when used with gasoline and other petroleum products, has been developed by the Electric Hose & Rubber Co., Wilmington, Del. Actual tests are reported to have shown that this hose will dump a truck load of gasoline faster because its smooth lining offers little frictional resistance to flow. The fact that it contains no joints or seams makes it impossible to crack or leak unless it is deliberately broken. Even if it is crushed it can be restored to shape by use of a vise or mallet.

Delmar tank filler hose is used for loading and unloading trucks and tank cars, airplane refueling and for general transfer of liquid petroleum products.

"The Design of Jigs and Fixtures," published by the Linde Air Products Co., 205 East Forty-second Street, New York, consolidates and crystallizes current ideas on how to design jigs and fixtures for welding, whether production fabrication or repair work.

Notes About Trade Literature

The Brown Instrument Co., Philadelphia, Pa., has published a new catalog on Brown hygrometers for recording and controlling humidity, illustrating the latest models and explaining the various operating principles.

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With the increasing use of corrosion-resisting alloy steels has come the problem of fabricating these alloys by modern methods, one of the most important of which is the oxy-acetylene welding process. Recommended practices for oxwelding corrosion-resisting steels, based on the investigations of Union Carbide & Carbon Research Laboratories, Inc., are given in a booklet obtainable from the Linde Air Products Co., 205 East Forty-second Street, New York.

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The new 1,900-degree Superex insulating blocks recently announced by Johns-Manville, 22 East Fortieth Street, New York, are described in a folder, IN-28-A. The folder discusses also the principles of combination insulation and shows how the careful selection of two or more insulating materials for a furnace or boiler wall not only assures economical operation but may result in lower construction costs.

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An attractive booklet on "White Paint for Profit" may be obtained from the New Jersey Zinc Co., 160 Front Street, New York. Its discussion of heat reflection and heat radiation is of interest to owners of tanks, trucks and other property that may be subjected to intense heat.

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An attractive 74-page catalog, No. 99, enumerating and illustrating the various applications of Reeves variable speed transmission, is obtainable from the Reeves Pulley Co., Columbus, Ind.

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A comprehensive guide to the fabrication of stainless clad steel has been issued by the Ingersoll Steel & Disc Co., 310 South Michigan Avenue, Chicago (division of Borg-Warner Corp.). This 16-page booklet, "Manual of Welding and Fabricating Procedures for IngAclad Stainless Clad Steel," describes the various methods of welding, soldering, lock seaming, riveting, deep drawing, pickling, heat treating, etc., encountered in fabricating products of stainless clad steel.

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A 16-page copiously illustrated catalog, No. 1,595, on locomotive cranes has been completed by Link-Belt Co., Chicago and Philadelphia. Tables of clearance dimensions and rated lifting capacities are given for machines for operation by either a gasoline, Diesel, electric or steam-driven power unit.

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The Worthington Pump & Machinery Corp., Harrison, N. J., has for distribution bulletins on Worthington Diesel engines and on Worthington Monobloc centrifugal pumps.

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A new and revised edition of bulletin No. 1,864-A, describing the operation of the "Max-i-flo," has been issued by Ingersoll-Rand, 11 Broadway, New York. The Max-i-flo is an automatic control device for intermittent pumping of oil wells through gas or air displacement.

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A booklet describing shielded arc welding may be obtained on request from the Lincoln Electric Co., Cleveland, Ohio, manufacturer of arc welding equipment.

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The Mason-Neilan Regulator Co., 1190 Adams Street, Boston, Mass., has for distribution a bulletin giving information about the Mason-Neilan recording thermometers.

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An eight-page illustrated circular, which shows for the first time the complete line of Westinghouse gear units for individual oil well pumping service, has been released by the Westinghouse Electric & Manufacturing Co. Copies are available through the nearest district office or direct from the advertising department, East Pittsburgh, Pa.

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A 104-page catalog announced as ready for distribution by the Dow Chemical Co., Midland, Mich., lists the company's full line of chemicals, many of which are new. The chemical analysis of all products and some of the uses of each are given.

Renewable Steel Liner Is Introduced by MacClatchie

A renewable steel liner for mud pumps has been placed on the market by the MacClatchie Manufacturing Co. of Compton, Calif. This liner consists of three parts: (1) A hardened alloy steel liner sleeve made of seamless tubing milled to specifications and ground to a mirror-like finish; (2) a gland which slides on the end of the liner and lasts indefinitely, and (3) a packing rubber, economically replaceable when necessary.

The company has acquired exclusive rights to manufacture these liners under U. S. Patents Nos. 1,592,266 and 1,837,675. The principal advantages cited for the equipment are long life, due to the hardened alloy steel construction; lower first cost; ease of installation and pulling; and low cost of replacement parts, made possible by quantity production.

MacClatchie liners are made in a complete range of sizes for all makes of pumps. Literature may be obtained from the manufacturer.

Port-a-Spray Simplifies Various Automotive Jobs

Filled with oil, cold water paint, windshield solvents, etc., and charged with air from an ordinary tire chuck, the Port-a-sprays permit, as the manufacturer puts it, "tucking your air compressor under your arm." Trailing air hose is eliminated, yet full compressor capacity is instantly available everywhere in the shop or driveways.

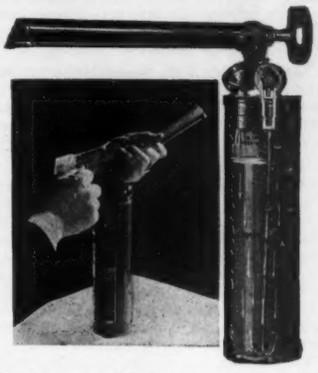
The line comprises a special windshield spray, two general utility sprays and one combination spray which is adapted to handling lacquer as well as oil or solvents. Rugged construction, corrosion-proof lead-lined tanks, brass fittings, clog-proof removable strainers, and interchangeable mist and needle spray "no drip" nozzles are a few of the line's features.

With Port-a-sprays, windshield cleaning, spring spraying, cold water painting, fender touching up and dozens of other every day jobs are speeded up and simplified. Details may be had from jobbers or the Earl Webber Co., Daily News Building, Chicago.

Overcomes Disadvantages of Old-Type Extinguishers

A new type of fire extinguisher manufactured by the Wil-X Manufacturing Corp., 29 Ryerson Street, Brooklyn, N. Y., overcomes the disadvantages of old style hand-operated extinguishers.

The new "machine-gun" extinguisher, invented by Peter L. Wilbur, creator of



the Pyrene model, has the pump on the outside of the cylindrical container where it cannot gum up, jam, or corrode. The pump never comes in contact with the liquid, only compressing air which forces the liquid out under high pressure. A quick lift of the pump, and the new Wilbur supplies a steady stream of Wil-X liquid directly at the base of the flames.

The new Wilbur extinguisher is easier to aim, and operates with machine-gun accuracy. Its liquid will not leak or evaporate, for it is hermetically sealed when not in use. The Wil-X liquid is said to be a nonconductor of electricity, and will withstand a temperature of 52 degrees below freezing.

The pump and nozzle fold down alongside the extinguisher when not in use. In action the pump is raised quickly, which instantaneously opens the positive sealing valves. The valves close automatically when the pump is lowered, shutting off the stream and saving the remaining liquid.

New Feed-Water Regulator Presents Many Advantages

An interesting installation of feed-water regulators of the column type has been made by the Natural Gas Equipment Co. of Los Angeles, Calif., in the new Maynard pumping plant of the General Petroleum Corp. at Burbank. The N.G.E. column float type feed-water regulator is said to be very positive in its function of holding a constant water level and a uniform flow of feed water to the boiler. The controller has a range adjustment which makes it possible to adapt the controller to the load requirements; that is, the controller may be set to maintain a level within one-fourth inch or it may be set to maintain a level within 1 or 2 inches or more, if required, or any intermediate range. The advantage of this adjustment is that a more uniform flow of feed water to the boiler can be maintained under severe changing load conditions if the water level is allowed to vary slightly. Where operating conditions are steady a very close water level can be maintained with equal uniformity in rate of feed water.

The new controllers are suitable for many services and are available in three standard lengths: 4-inch diameter by 8 inches long, 3-inch diameter by 16 inches long, and 2½-inch diameter by 30 inches long.

N.G.E. level control equipment is used for maintaining exact levels of liquids in fractionating towers, stills, receivers and boilers. An outstanding feature of the controller is the N.G.E. precision pilot, which will operate remotely located diaphragm motor valves. Either the inflow or the outflow may be controlled directly or may be controlled indirectly by governing the steam supply to a pump.

Gulf Coast Fields

(Continued from Page 69)

Rorick has been abandoned at 6,724 feet after testing 2,400 feet of salt water on a drill stem test from 6,423-51 feet. It is in the west central part of the county in the John C. Ogburn Survey. It is reported that Ralph Johnston and the Gem Oil Co. are selling spreads on their block of 5,000 acres between Satsuma and Fairbanks. Several major companies are reported to have purchased considerable acreage in the block.

Another dry hole was marked up for Harris County when Quaker City Oil Co. abandoned its No. 1 Goar, in the Sarah McKissick Survey, at a total depth of 6,758 feet.

Polk County

In the Ace area, Polk County, Kirby Petroleum Co. and others' No. 1 Kirby Lumber Co., a wildcat in the James Stephenson Survey made a drill stem test from 5,340-50 feet with a three-eighths inch choke on top and bottom and tested 4 thribbles of drilling mud, 8 thribbles of drilling mud and sand and 18 thribbles of salt water which was accompanied by enough gas to flow mud and water while coming out of the hole. The operators are preparing to core deeper. It is reported to be checking considerably lower than the company's No. 1 Kirby, due east in the same survey, which was abandoned.

Jackson County

One more dry hole was registered for the Vanderbilt area Jackson County, when Phillips Petroleum Co. abandoned No. 1 State Realty at 6,006 feet. This is the third well to be drilled in this area, and leaves one other active test to be completed. It is the same company's No. 1 J. H. Drummond, 4,000 feet west of the discovery. On a drill stem test from 5,800-02 feet it tested 12 thribbles of oil and salt water. It is bottomed at 6,012 feet and appears to be another dry hole.

Bosco Field

Three wells in the Bosco Field, Acadia and St. Landry Parishes, Louisiana, have casing cemented on oil sand and should be on the completion list within a few days. Superior Oil Producing Co.'s No. 1 Comeaux, northeast of the discovery, cemented 9⅝-inch casing at 7,838 feet, and is waiting on cement to set. It is bottomed at 7,849 feet. Same company's No. 1 Sidney Fall, Section 27-8s-3e, is in oil sand at a total depth of 7,855 feet and is waiting on cement to set. No. 1 Forrestier, in Section 34-8s-3e, is preparing to drill plug at 7,841 feet.

In the Gillis area, Calcasieu Parish, Union Sulphur Co.'s No. 2 Barbee lost a joint of 6-inch pipe in the hole at 7,916 feet, total depth, and is now trying to sidetrack just above 7,890 feet. In the same area the company is getting started on No. 1 Calcasieu River State Land, wildcat three-quarters mile south of No. 2 Barbee. This is the fourth test to be drilled on this prospect on the company's 7,000-acre block. Wheeler Oil Co. has derrick up for a wildcat on its 2,000-acre block, located east of Lake Charles in Section 28-9s-7w.

Roanoke Field

Shell Petroleum Corp.'s No. 1 Jernigan, in the Roanoke Field, Jefferson Davis Parish, an east offset to the discovery, topped the oil sand at 8,744 feet and is waiting on cement to set. It is bottomed at 8,755 feet and will probably be completed this week. This will be the second well in the field discovered in June when the company completed its No. 1 Kratzer. The sand found in the Jernigan test is considerably lower than the discovery. Humble Oil & Refining Co.'s No. 3 Devilbiss, three-quarters of a mile southwest of the discovery, is below 8,746 feet and has not shown anything of importance. The company's No. 1 Martin Kratzer, one-half mile southwest of Shell's No. 1 Kratzer, is drilling below 8,631 feet in shale.

Humble Oil & Refining Co. is starting a test on the Darrow Dome in Ascension Parish. The test is being carried as No. 2 S. Gumbel & Co. and is in Section 33-10s-2e, about 500 feet southwest of Rio Bravo Oil Co.'s No. 1 Gumbel, which was abandoned at 6,052 feet. Six tests have been drilled on the dome, three of which have made some oil but have been abandoned.

Oklahoma Fields

(Continued from Page 76)

Pioneer Petroleum Co. and McCoy's No. 1 Bayne, SE SW SW Section 16-5-6, is a 10-bbl. completion in Hunton lime at 2,620-2,750 feet.

Moore and others were building rig for No. 1 Woodruff, SW NW SE Section 29-2-7, in the Fitts Pool, and have cellar dug for No. 1 Smith, NW cor. Section 31-2-7.

In Southern Counties

Schermerhorn Oil Co. and Marcum's No. 18 Marcum, 740 feet south and 950 feet east of C Section 3-4-3w, in the old Hewitt Pool, Carter County, shot a sand at 920-98 feet, but got only a 4-bbl. well with 20 bbls. of water. It was completed. Same operator's No. 19 Marcum made a 15-bbl. well from sand at 910-92 feet and was completed.

Ed Saunders had slush pits dug for No. 5 Hightower, SE SW NE NE Section 15-2s-5w, Stephens County.

Fred Shores and others was drilling at 65 feet in No. 1 Ratliff, SE cor. NE Section 29-1s-2w.

Rocky Mountain Area

(Continued from Page 82)

after plugging back from 1,660 to 900 feet.

Stillwater County

Continental Oil Co.'s No. 1 Orr, SW NW SE Section 18-5s-17, Nye-Dean district, has derrick completed.

Phillips County

Bowdoin Gas Utilities Co.'s No. 527 McChesney, C SE NE Section 14-31-34, Bowdoin distdict, is drilling at 120 feet, and the Town of Saco's No. 1 fee, SE cor. Section 7-31-34, is drilling at 700 feet. British-American Syndicate's No. 1 Hedges, C NW NE Section 17-32-33, is drilling at 350 feet.

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7s-21, Dry Creek, is drilling at 5,756 feet.

Liberty County

J. H. Hamilton and others' No. 1 Northern Farms, C NE SW Section 10-37-5e, Flat Coulee, is drilling at 1,500 feet. John Wilde's No. 2 Mahoney, W SW SE Section 23-37-4e, Whitlash district, is drilling at 210 feet, corrected depth, and the Western Natural Gas Co.'s No. 3 Shaffer, N SW SE Section 14-37-4e, a first report, is drilling at 200 feet.

Big Horn County

Big Horn Oil & Development Co.'s No. 6-A, NE cor. SW Section 14-1s-33, Hardin district, a first report, was completed at 730 feet for 50,000 feet of gas a day. The company supplies gas to the town of Hardin.

Petroleum County

Guy Smith and others' No. 1-A, SE cor. Section 3-13-26, Flatwillow district, is drilling at 2,200 feet.

Judith Basin County

Fletcher E. Hunt's No. 1 Oregon, NE SW SE Section 20-14-15, Hobson district, encountered 2,000 bbls. of water a day in the Morrison at 1,116 feet and was abandoned at 1,233 feet. It will be made into a water well and another well farther back from the fault will be drilled.

UTAH

The Mountain Fuel Supply Co.'s No. 2 Murphy, S NE NE Section 21-3n-24, Clay Basin, Daggett County, is drilling at 4,799 feet.

Ramsey Petroleum Corp.'s No. 1 Senior discovery on the Last Chance structure in Emery County is said to have a new commercial gas field in that state with promise of developing into an oil discovery.

WASHINGTON

Northwest Oil Research Corp.'s No. 1-A Norco, SW Section 26-22-20, Wenatchee Heights, Chelan County, is reported to have a show of 39 degrees gravity, paraffin base oil in a coarse gray sandstone carrying considerable lime at 1,510-20 feet and is drilling ahead. W. Hale and others' No. 1 King, SE SW Section 27-39-2, Bellingham district, Whatcom County, which was taken over from the Abbotsford Oil & Gas Co. at 410 feet, struck a flow of 100,000 feet of gas at 475 feet. People's Gas & Oil Co.'s No. 1 Donnie Boy, Section 19-17-28, Frenchman Hills district, Grant County, is building camp and moving in materials for a deep test.

REDUCE GASOLINE STOCKS

At the time the October allocation of gasoline production was approved by Administrator Ickes provision was also made for a reduction in motor fuel inventories during the month. The order stated: "A slight increase in gasoline production was provided in establishing a national allocation of 33,690,000 bbls. for October as compared with 32,380,000 bbls. in September.

"Part of the increase was made necessary by October having 31 days instead of 30 as in September.

"It is further determined that the maintenance of desirable economic levels of gasoline inventories, due regard being given to the normal seasonable decrease in gasoline stocks, requires that gasoline inventories be reduced 1,450,000 bbls. during the month of October, 1934."

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PROSPECTORS, Promoters and Land Buyers, activity Amory, Miss., gas field. Stuck Springs area Marion County, Alabama. Geological piece for development. Acreage for sale or lease. D. Cooper, Hamilton, Ala.

WE OWN and offer fee lands, leases, royalties in 41 Texas counties. 80 to 40,000 acres. Leases 50c up. Royalties and fee $1.00 per acre up. Buyers or brokers write us. American Investment Co., Box 687, San Antonio, Tex.

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